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Brief Communication

Unrecognized Even in Death: The Statistical Invisibility of Autistic People in Brazilian Suicide Mortality Records

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Unrecognized Even in Death: The Statistical Invisibility of Autistic People in Brazilian Suicide Mortality Records

Running head: Statistical invisibility of autism in suicide

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Abstract

Objective: Suicide is a leading cause of premature death in Brazil. Some groups are at higher risk of committing suicide, including individuals with Autism Spectrum Disorder (ASD). This study aimed to assess whether autistic people are being identified in Brazilian official mortality records and whether this condition is being acknowledged as a contributing factor to suicide.

Methods: We assessed a standardized version of the Brazilian Mortality Information System (SIM), filtering deaths by suicide from 1996 to 2024 in which the underlying cause of death was intentional self-harm, sequelae of intentional self-harm, or undetermined intent possibly due to self-harm. Variables potentially indicating contributing conditions related to ASD or intellectual disability (ID) were examined.

Results: Of 579,121 deaths by suicide, only 81 certificates recorded ASD or ID, and only 16 recognized autistic people. Fifteen were men, with a mean age 33.5 ± 17.2 years. The first certificate listing ID was in 2000; the first mentioning autism was not until 2008.

Conclusion: Our findings suggest under-reporting of ASD as a factor relevant to suicide and a substantial disparity compared to other countries' statistics. Improving certifying professional training and integrating datasets may enhance suicide prevention efforts for people with neurodevelopmental conditions.

Introduction

Suicide is one of the main causes of early death worldwide, responsible for over 700,000 deaths each year and appearing among the twenty leading causes of mortality in all age groups. It has a profound impact on families and communities and represents a serious challenge for public health, especially because of the high number of years of life lost and its greater impact on younger populations. In 2021, about 73% of suicides occurred in low- and middle-income countries.¹ In Brazil, the suicide rate has more than doubled over the past four decades, rising from 3.3 deaths per 100,000 inhabitants in the 1980s to between 6.4 and 6.9 deaths per 100,000 inhabitants in the late 2010s, now averaging more than one death per hour.^{2,3} These figures highlight the need for prevention strategies supported by reliable epidemiological data.

In this scenario, some groups are at especially high risk, including autistic people.^{4,5} Autism spectrum disorder (ASD) is a neurodevelopmental condition that affects communication, social interaction, and behavior, and can present with very different levels of support needs. Global prevalence estimates suggest that approximately 1% of the population is autistic, although rates vary substantially across regions. Recent data from the U.S. Centers for Disease Control and Prevention indicate a prevalence of approximately 1 in 31 cases in the United States in 2025, reflecting increased detection in high-income settings.^{4,6,7}

Evidence from large international studies shows that autistic people are almost three times more likely to die by suicide compared to the general population, with even greater relative risk among autistic women and those without ID. This increased risk is likely the result of a combination of mental health conditions, such as depression and anxiety, and social factors, including stigma, exclusion, and difficulty accessing adequate healthcare.^{4,8} These estimates refer specifically to suicide deaths, and not to suicidal thoughts or attempts, underscoring the seriousness of the problem.

However, unlike previous studies that focused on estimating suicide risk and suicidal ideation in samples of autistic individuals, the present study analyzed national mortality records to determine whether autism is identified and documented as a contributing condition for suicide at the population level in Brazil.

Although this association is well documented in high-income countries, the proportion of autistic people among suicide deaths in low- and middle-income countries remains largely unknown. In Brazil, studies on the prevalence of ASD are rare, geographically limited, and use varied methodologies, which makes it difficult to apply their results to national suicide statistics. To our knowledge, no study has examined suicide among autistic people in a Brazilian cohort. As recently noted by Dellazari and colleagues (2025),⁹ this lack of information hinders the understanding of autism in the national context. Therefore, we analyzed national mortality data to determine whether autism is documented as a contributing condition in suicide deaths in Brazil, aiming to evaluate its visibility within official mortality statistics.

Methods

We used Brazilian suicide mortality data from the Mortality Information System (SIM, in Portuguese abbreviation). Created in 1975 by the Brazilian Ministry of Health, SIM gathers nationwide mortality data based on death certificates (DC) issued by physicians. These documents are processed at the municipal level, then sent to state databases, and finally integrated into the national system.¹⁰ Weaknesses or inconsistencies in this process, especially locally, can compromise public health surveillance, planning, and policy decisions. To avoid the use of inconsistent or invalid data, we used SIM data that were standardized and processed according to the methodology of the Platform for Data Science Applied to Health, Oswaldo Cruz Foundation (Fiocruz).¹¹ All de-identified data are publicly available from the Brazilian Ministry of Health, therefore, no ethics approval was required. We selected SIM records from 1996 to 2024 for people aged 5 to 80 years whose underlying cause of death, according to the International Classification of Diseases (ICD-10) codes, was intentional self-harm (X60-X84), undetermined intent possibly due to self-harm (Y10-Y34), or sequelae of intentional self-harm (Y87.0). We searched the variables describing contributing conditions for ICD-10 categories related to ASD (F84.0, F84.1, F84.4, F84.5, F84.8, F84.9) and ID (F70-F73, F78-F79), given its frequent overlap with autism and

potential to complicate diagnosis.¹² To avoid excluding possible cases, we applied no additional filters, retaining records even when other information was incomplete or missing.

Results

Out of 579,121 suicide deaths recorded during the study period, only 81 individuals (0.014%) had a documented diagnosis of ASD or ID. Just 16 (0.0028% of all suicide deaths) were identified as autistic people. Fifteen (93.8%) were men; the mean age was 33.5 ± 17.2 years; at least 13 (81.3%) were single, nine (56.3%) were identified as White, and at least seven (43.8%) had completed 8 years or more of schooling. Only seven (43.8%) causes of death were identified as confirmed suicide. Additionally, in our sample, the first recorded death by suicide of a person with ID was in 2000, whereas the first such death of an autistic person was not recorded until 2008. Based on global estimates, in 2021 2.4% (95% UI: 1.3-3.8%) of suicides in South America involved autistic people,⁴ which would mean around 14,000 such deaths in Brazil from 1996 to 2024 (assuming a stable incidence), about a thousand times the number found in SIM records.

Discussion

In 2025, for the first time, the Brazilian Institute of Geography and Statistics (IBGE) released census-based estimates of the autistic population: about 2.4 million people (about 1.2% of Brazilians), with higher prevalence among men, self-identified white Brazilians, and higher school enrollment, largely reflecting a younger age structure.¹³ These figures, derived from patient or informant-based reports of clinician-made diagnoses, establish the first national baseline of ASD in Brazil. This benchmark consists of global autism demographics. On that basis and given evidence of elevated suicide mortality among autistic people, we would expect Brazilian suicide statistics to display a broadly similar demographic profile after age- and sex-standardization, if autism were routinely recorded on DC.

The difference between the expected and the observed number of autistic suicide deaths in Brazil points to several possible explanations. Autism is often underdiagnosed, especially in adults, reducing the chance of it being recorded on DC. Even when diagnosed, it may not be routinely noted as a contributing condition, either due to gaps in training or limited awareness among certifying physicians. The historical invisibility of autism in administrative records further reduces its representation in mortality data, with direct consequences for suicide prevention planning, surveillance, and resource allocation.

Social and cultural factors may worsen this underrepresentation. Stigma related to both suicide and autism may lead family members to withhold the diagnosis from the certifying doctor, either because they think it is irrelevant or because they fear discrimination. The stigma surrounding suicide itself may also lead to the use of “undetermined intent” for the cause of death instead of explicitly stating self-harm, particularly in more conservative communities. These mechanisms add to systemic and procedural limitations that contribute to underreporting.

Our outcomes are consistent with those of Dellazari and colleagues (2025)⁸ and contribute to highlighting the lack of Brazilian epidemiological data on autistic people. Although public understanding of ASD has only increased in recent years, this alone is insufficient to explain the substantial difference between expected and recorded cases found in our study. Even under cautious assumptions, the thousand-fold disparity found in our analysis reflects a systemic failure to acknowledge neurodivergence as a contributing factor, rendering these individuals statistically non-existent in official Brazilian records even in death.

Despite the relevance of our findings, this study has limitations. The Mortality Information System (SIM) does not include information on family members or caregivers of deceased individuals. Therefore, it was not possible to assess suicide outcomes among family members of people with autism, despite the recognized relevance of caregiver burden, stigma, and lack of support networks in this context.

Addressing this “epidemiology of invisibility” demands timely and concrete actions. Although the present data do not allow clinical-level analyses, the marked underrepresentation of autism in suicide mortality records highlights the need for improved training of healthcare professionals, including physicians, psychologists, and psychiatrists. Greater awareness of autism across the lifespan may contribute not only to improved clinical care but also to more accurate documentation in high-risk contexts such as suicide prevention.

The underrepresentation of autistic people in Brazilian suicide records not only leads to an incomplete understanding of suicide in the country but also limits the development of targeted preventive strategies for a group known to be at elevated risk. This is a matter that requires coordinated efforts from researchers, healthcare professionals, policymakers, and data manager, so that ASD is more accurately recognized, documented, and followed over time. Without such changes, the real toll of suicide among this population will remain hidden, and so will opportunities to prevent it.

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Disclosure

The authors declare no conflicts of interest.

CRedit authorship contribution statement

FDG: Conceptualization; Methodology; Software; Validation; Formal analysis; Investigation; Data curation; Writing - original draft; Writing - review & editing.

NH: Methodology; Formal analysis; Investigation; Data curation; Writing - review & editing.

DCC: Methodology; Software; Formal analysis; Data curation; Writing - review & editing.

LAQ: Writing - original draft; Writing - review & editing; Resources; Supervision; Project administration; Funding acquisition.

AEN: Writing - original draft; Writing - review & editing; Resources; Supervision; Project administration; Funding acquisition.

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