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# ANTHROPOCENE, DISABILITIES AND SOCIAL VULNERABILITIES: MENTAL HEALTH PROBLEMS AND DEVELOPMENT OF CHILDREN WITH DISABILITIES

## ANTROPOCENO, DEFICIÊNCIAS E VULNERABILIDADES SOCIAIS: AGRAVOS NA SAÚDE MENTAL E DESENVOLVIMENTO DE CRIANÇAS COM DEFICIÊNCIA

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**Abstract** - The Anthropocene and the climate emergency are making disasters like the one that occurred in Rio Grande do Sul increasingly frequent. This fact especially affects children in situations of greater social vulnerability, such as those historically marginalized by socioeconomic structures consolidated in the exploitation and degradation of nature and human life. The new environmental and public health challenges affect minorities most affected by intersectionalities established in the overlapping of social markers of difference, such as gender, race, class and disabilities, as indicated by reports from UNESCO and the World Bank. In addition to the presented issues, there are major challenges in the schooling of children and youth with disabilities, who suffer prejudice and discrimination commonly expressed in different forms of ableism, whether explicit or veiled. Free play and access to nature are not always guaranteed rights to children with disabilities. This fact can result in the compromise of the overall development and mental health of children, due to barriers consolidated in the insecurities of family members, teachers and communities. The perception of disability and its interaction with the increased risk of violence in certain urban, rural and forest areas and of accidents due to the lack of accessibility in public and private spaces, can constitute limiting factors for inclusion. In this dramatic scenario, there is a need for active research, in which theory embraces reality based on formal and informal education practices and political activism in defense of children and the environment. As final considerations, it is worth noting that change needs to begin today so that the future of new generations is less challenging than projections indicate.

**Keywords:** Anthropocene; mental health; disabilities.

**Resumo** - O antropoceno e a emergência climática tornam cada vez mais frequentes desastres como o ocorrido no Rio Grande do Sul. Este fato atinge, especialmente, as infâncias em situação de maior vulnerabilidade social, como aquelas historicamente marginalizadas por estruturas socioeconômicas consolidadas na exploração e degradação da natureza e da vida humana. Os novos desafios ambientais e de saúde coletiva atingem mais as minorias comprometidas pelas interseccionalidades constituídas na sobreposição dos marcadores sociais da diferença, como: gênero, raça, classe e deficiências, como indicam relatórios da UNESCO e do Banco Mundial. Além das questões apresentadas, existem

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grandes desafios na escolarização de infâncias e juventudes com deficiência, que sofrem preconceito e discriminação comumente expressos em diferentes modos de capacitismo, explícitos ou velados. Nem sempre o livre brincar e o acesso à natureza constituem-se como direitos garantidos a crianças com deficiência. Este fato pode resultar no comprometimento do desenvolvimento global e na saúde mental da criança, em função de barreiras consolidadas nas inseguranças de familiares, docentes e comunidades. A percepção da deficiência e sua interação com os riscos aumentados de violência, em determinadas zonas urbanas, do campo e da floresta, e de acidentes, pela falta de acessibilidade nos espaços públicos e privados, podem constituir-se como fatores limitantes para a inclusão. Neste cenário dramático, aponta-se a necessidade de realização de pesquisas ativas, em que a teoria abrace a realidade a partir de práticas de educação formais e não-formais e do ativismo político em defesa das infâncias e do meio ambiente. Como considerações finais tem-se que a mudança precisa começar hoje para que o futuro das novas gerações seja menos desafiador do que indicam as projeções.

**Palavras-chave:** Antropoceno; saúde mental; deficiências.

## INTRODUCTION

According to the World Bank Group (2018), approximately 85 million people with disabilities live in Latin America and the Caribbean. Until recently, these people were not included in official statistics or in public policy development in most countries.

Some countries are more vulnerable to political and environmental crises and the climate emergency, due to socioeconomic issues and social inequalities, and therefore require greater humanitarian aid. In this scenario, climate emergencies disproportionately affect people with disabilities, who are made vulnerable by precarious access to information and services.

The Brazilian Inclusion Law (LBI) or Statute of Persons with Disabilities (Brazil, 2015) is “intended to ensure and promote, under conditions of equality, the exercise of fundamental rights and freedoms by persons with disabilities, aiming at their social inclusion and citizenship”. The Federal Constitution of Brazil (Brazil, 1988) and the Statute of Children and Adolescents (Brazil, 1994) already ensured the right to social inclusion of persons with disabilities, however, the LBI expands and details aspects of inclusion and rights. The LBI (Brazil, 2015) includes accessibility as a right and defines it as the possibility of using spaces, furniture, urban equipment, buildings, transportation, information and communication, including their systems and technologies, and all public or private services and facilities for collective use, in urban or rural areas, by persons with disabilities or reduced mobility. Barriers are considered to be the limits or impediments to a person’s social participation and the exercise of their rights to accessibility, freedom of movement and expression, among others. This document identifies six types of accessibility: urban, architectural, transport, communications and information, attitudinal and technological.

Regarding accessibility, Sasaki (2024) formulates seven dimensions, innovating especially by proposing the natural dimension, which consists of the absence of barriers in spaces created by nature, on lands and waters of public or private property. Thus, the accessibility of natural and cultural landscapes, integral parts of the Brazilian Natural Heritage and World Heritage (IPHAN, 2024), constitutes a right that must also be guaranteed to the childhoods of children with disabilities through public policies to democratize access.

All these rights and guarantees of people with disabilities are threatened during humanitarian crises and require greater attention so that mechanisms can be established to safeguard the safety, autonomy and health of this minority group, whose population is growing every day.

According to the Continuous National Household Sample Survey of the Brazilian Institute of Geography and Statistics (Continuous PNAD/IBGE, 2022), the population with disabilities in Brazil is estimated at 18.6 million people aged 2 or over, which corresponds to 8.9% of the population in this age group. Of this total, the profile was more female (10.0%) than male (7.7%). Regarding color or

race, there was a higher incidence of people who identified themselves as black (9.5%), compared to 8.9% brown and 8.7% white. Thus, it is possible to perceive the increase in the number of people with disabilities associated with multiple social markers of social vulnerabilities, such as gender and race, which may contribute to worsening the panorama of challenges to be faced in the climate emergency.

The inclusion of people with disabilities ensures greater autonomy and effective social participation, thus improving their quality of life. When there are barriers to mobility and the exercise of daily activities for people with disabilities, their mental health can suffer with anxiety and depression. In climate emergency scenarios, with a high level of insecurity and even greater barriers of all kinds, new challenges arise that greatly affect their safety, mobility and routines, which are essential for their well-being.

In addition to the aspects mentioned, some studies indicate that environmental factors have a strong influence on the emergence and worsening of congenital and acquired disorders and disabilities. In this sense, Silva (2024) indicates that the number of children diagnosed with autism spectrum disorders (ASD) and attention deficit hyperactivity disorder (ADHD), two main neurodevelopmental disorders in children, has increased significantly in recent decades and points to environmental factors as one of their probable causes. Despite the multifactorial etiology of these conditions, epidemiological studies show a strong correlation with environmental pollutants, such as plasticizers. As an example, the study by Stein et al. (2023) shows that neurodivergent children have impaired detoxification pathways for the plasticizers bisphenol A (BPA) and diethylhexyl phthalate (DEHP), subjecting their bodies to the deleterious effects of these substances on neurodevelopment, from intrauterine life. The dizzying increase in the number of cases of these disorders and the lack of capacity of public structures to respond at the same speed with the provision of services can worsen the condition of neurodivergent people and their caregivers.

Therefore, the strong influence of environmental factors on people's mental and global health can be seen, whether strengthening with access to the well-being that nature can offer or degenerating with the effects of the Anthropocene and climate emergencies.

## 1 Anthropocene and mental health

The human perception of what is health and illness, of what is normal and pathological, depends not only on organic factors, but also on subjective, socioeconomic and environmental aspects. Canguilhem (2009) considers that normality consists of the organism's capacity for transformation in the face of circumstantial changes in the external and internal environment. He understands the pathological as another expression of life, even if impoverished by different degrees of intolerance to adverse living conditions. Therefore, he presupposes dialogue with those who experience the pathological and have the "feeling of a thwarted life".

For Canguilhem (2009), health is, therefore, an individual experience that is related to the person's interaction with their environment, an approach that has been used in studies on disability, indicating a change in thinking based on the perspective of the biomedical model to a new way of perceiving inclusion, such as from its social perspective. The social model, instead of seeking to adapt the person to standards of normality, transfers to society the responsibility for eliminating barriers to the participation of people with disabilities.

The concept of intersectionality emerges from black feminist movements and offers a great contribution by expanding the debate on the issues that make up the social model of disability inclusion based on the analysis of complex contexts composed of multiple markers of inequality.

According to Collins e Bilge (2021), intersectionality used as an analytical tool provides a fra-

mework to explain which categories of race, class, gender, age, citizenship status, and others position people differently in the world. Therefore, the matrix of intersection of social and economic inequalities serves as a measure for global social inequality. Akotirene (2023) assesses the condition of black women in the face of disability and points out that there is great social inequality in relation to other races. She points out that these women were the ones who gave birth to children with microcephaly, not because of poverty, but “because they are black, victims of racism, which generates impoverishment, precarious public services, and lack of sanitation”. She considers that epidemics such as the Zika virus and microcephaly constitute dimensions of institutionalized racism. Poverty, therefore, restricts opportunities and corresponds to a factor in the increase in cases of disability, due to hunger and malnutrition, the precariousness in the provision of public education and health services, and violence. Intersectional factors, such as structural racism, prejudice and discrimination in relation to gender and disability, interfere in the socioeconomic issue, worsening social inequalities.

According to Canguilhem (2009), the environment offers infidelities, such as: social inequalities, job insecurity, lack of security, weaknesses in the educational system, hunger and malnutrition, which interfere in the individual’s perception of their own health status. This perspective therefore indicates a correlation between health and territory, in which certain places collaborate to increase the population’s sense of quality of life and well-being, while others allow an increase in the number of cases and the intensity of the perception of impediment, worsening these conditions and enabling the emergence of mental health issues or secondary psychosocial disabilities.

The concept of Anthropocene demarcates the “period related to the most recent era of the Earth, the Cenozoic era, characterized by the effects of the impact of human activity on the ecosystems of planet Earth, such as climate change” (Dicionário Online de Português, 2024). Therefore, the central idea of the word consists of the impact of human action on Earth and the consequent change and climate emergency. According to Ribeiro et al (2019), the Anthropocene displays the human potential for production, transformation and destruction, in which the resulting geographical contexts have a strong influence on health. The civilizing process, the challenges present in the constitution of the psyche, combined with social vulnerabilities, promote conditions for the emergence of all types of mental disorders and violence that are aggravated by the environmental crisis and climate emergency. Also according to Ribeiro et al (2019):

The interfaces between the “I”, the “SuperI” and the Geographic Context become a permeable border between the Human Sciences and the Health Sciences, especially between Health Geography and Social Psychology, in the search to better understand the environment-territory-society-person-health interrelations; the capacities and limitations of individual and collective responses in the production of healthy life; as well as the consolidation of the Brazilian Unified Health System (SUS), through the organizational and doctrinal principles established in the country’s redemocratization process. (Ribeiro; Mota; Giraldez, 2019).

According to Rizzoto (2024), climate change is increasingly producing natural disasters such as floods, which cause deaths and displacements across the planet and have also affected Brazil. In 2024, the rains hit Rio Grande do Sul, which has a population of 10.88 billion inhabitants, affecting 90.9% of its 497 municipalities. The tragedy caused incalculable material damage, deaths and disappearances, affecting 2.1 million people. In this scenario, children, the elderly and people with disabilities are the most vulnerable. The new environmental and public health challenges affect people affected by intersectionalities the most, in the overlapping of multiple social markers of difference, such as gender, race, class and disabilities, as indicated by reports from UNESCO and the World Bank.

The Poverty, Prosperity and Planet Report 2024: Pathways out of the Polycrisis (World Bank Group, 2024b) points out that there are fewer countries with high levels of income inequality in the last 20 years. However, shared prosperity has declined and inequality remains high, especially in Latin

America and the Caribbean and in sub-Saharan Africa. This document also indicates the increase in the capacity to manage natural risks in regions where there has been a reduction in poverty and shared prosperity but points out that climate risks are significantly greater in the poorest environments. Thus, the global community needs to make a joint and inclusive effort to solve the issues that connect climate change and poverty. Governments, non-governmental organizations and the private sector, communities and citizens are the stakeholders in cooperation and acting to promote sustainability and strategies to promote a future with greater social justice.

Hartinger et al (2024) state that climatological and political events that occurred in 2023 contributed to driving the global climate and health agenda, exposing vulnerabilities and inequalities. COP28 inaugurated Health Day, which recognized the impact of climate change on health. However, the need for urgent additional measures is still highlighted, after analyzing the results of progress after the goals outlined in the Paris Agreement. The Lancet Countdown Latin America report, from 2023, highlights three key points for the resilient development of Latin America, with a focus on environmental and human health. They are: (a) Intersectoral public policies to increase climate resilience and reduce social inequalities, so that they promote the health of the population and reduce gas emissions; (b) Energy transition that enhances people's health and well-being, with a reduction in energy poverty and air pollution; (c) Increased climate finance, with fiscal commitments and multilateral banks for climate-resilient development. According to Hartinger et al (2024), financial losses and investments related to climate change adaptation are high. In 2022, economic losses in Latin America totaled US\$15.6 billion, largely due to floods and landslides in Brazil. Thus, the impact of these events on education can be seen, not only due to the loss of classes, but also due to the resources mobilized by climate change contingencies.

In addition to the presented issues, there are major challenges in the education of children and youth with disabilities, especially in the climate crisis, in addition to prejudice and discrimination commonly expressed in different forms of ableism, whether explicit or veiled. The rights to play and access to nature are not always guaranteed to children with disabilities. Motivations can be based on multiple factors, such as the ableist view of disability, the perception of increased risks of accidents and violence, and poor accessibility in public and private spaces. These facts limit inclusion and can result in impacts on the development and health of children.

According to UNICEF (2022), the 2021 Children's Climate Risk Index study indicates that more than two billion children in the world are exposed to more than one climate risk, shock, or stress. In Brazil, about 60% of children and adolescents, that is, 40 million people, are exposed to more than one risk, more than 8.6 million are exposed to the risk of lack of water and more than 7.3 million are exposed to the risks arising from river floods. The study also points out that people are subjected to situations of social, economic, cultural, political and institutional marginalization, being especially vulnerable to the impacts of climate change. The climate crisis disproportionately affects black, indigenous, quilombola children and adolescents, and those belonging to other traditional peoples and communities, migrants and refugees, children and adolescents with disabilities, as well as girls.

The rates related to the schooling of people with and without disabilities may reflect this mismatch that always puts this group at a disadvantage. According to the Continuous PNAD (IBGE, 2022), in the age group from 6 to 14 years old, 95.1% of people have disabilities and 99.4% of people without disabilities. Between 15 and 17 years old, 89.6% of people have disabilities versus 93% without disabilities. In the age group from 18 to 24 years old, 24.3% of people have disabilities and 31.8% without disabilities. It should also be noted that the illiteracy rate is always higher among people with disabilities, being 19.5% versus 4.1% without disabilities. These data indicate the need to increase investments in the creation of inclusion policies and affirmative actions in education, which innovate in their ability to manage the constant growth of this population and its specific educational needs.

Bezerra e Saltorato (2024) point out that the Conference of States Parties to the Convention on

the Rights of Persons with Disabilities (COSP17), held at the United Nations headquarters in New York in 2024, brought together governments, civil society organizations, and other stakeholders to discuss issues involving the inclusion of persons with disabilities in times of crisis. It specifically addressed three main subthemes: (a) promoting technological innovations and knowledge transfer for an inclusive future; (b) promoting special attention to persons with disabilities in situations of risk and humanitarian emergencies, highlighting the importance of coordinated actions in crisis scenarios, such as the wars in Ukraine and Syria, as well as climate disasters, such as the one that occurred in Rio Grande do Sul; (c) promoting the rights of persons with disabilities to decent work and sustainable livelihoods, highlighting the role of economic inclusion in promoting a more just and accessible society.

In this dramatic scenario, it is essential to develop action strategies that are effective in providing protection mechanisms and the necessary support in times of humanitarian crises and climate emergencies. The relevance of intersectional studies in the field of disability, considering gender, race and social class, is also highlighted. There is a need for research that addresses the challenges present in crises and that contributes knowledge to the formulation of educational practices and political activism in defense of children and the environment.

## Final Considerations

The idea of what is normal and pathological, or what is health and illness, depends on individual perception and not only on adverse physiological characteristics, but there is also a strong correlation between this perception and aspects of the environment in which the person lives. This thinking contributes to the understanding of three perspectives of analysis of disability inclusion: biomedical, social and intersectional.

The Anthropocene has an impact on human and planetary health and is exacerbated by poverty and vulnerabilities generated by the overlapping of multiple markers of social inequality, such as race, gender, social class and disability. However, society has the capacity to promote conditions that favor health and well-being, as well as to increase the autonomy of people with disabilities, through accessibility and the provision of assistive technology.

The high financial costs of preventive and reconstruction measures in the face of climate emergencies generate tensions and reduce the possibilities for investments in other categories of public policies that are also relevant, such as education and health, creating difficulties for people with and without disabilities. Discussion forums on the rights of people with disabilities seek innovative solutions in strategies and support for austere scenarios, since the risks and vulnerabilities are even greater for this minority group.

The conclusion is that a radical and immediate change is needed, with solidarity, fraternity and collaboration from everyone, so that the rights of people with disabilities are guaranteed, especially in circumstances of humanitarian crises.

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