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Welcoming inclusion: the Children's Sensory Reception Room in social security services. How adapting public spaces for neurodivergent people transforms institutional culture and enables social rights

Inclusão que acolhe: a Sala de Acolhimento Sensorial Infantil no atendimento previdenciário. Como a adaptação de espaços públicos para pessoas neurodivergentes transforma a cultura institucional e viabiliza direitos sociais

Inclusión que acoge: la Sala de Acogida Sensorial Infantil en la atención de la seguridad social. Cómo la adaptación de los espacios públicos para personas neurodivergentes transforma la cultura institucional y hace viables los derechos sociales

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Abstract: This article analyzes the impacts of adapting physical spaces in public administration services for neurodivergent individuals, taking the implementation of the Children's Sensory Reception Room at the Social Security Agency (APS) in Poções, Bahia, as an empirical case study. The research is grounded in the principles of the social model of disability, the Brazilian Inclusion Law (Law No. 13,146/2015), Law No. 12,764/2012, and concepts of neuroarchitecture and sensory integration. Given the substantial increase in demand for biopsychosocial evaluations related to the Continuous Cash Benefit (BPC/LOAS) for children with Autism Spectrum Disorder (ASD), establishing a sensory refuge and regulation zone mitigated invisible barriers arising from stress and sensory overload. The methodology combined documentary analysis of administrative records from the INSS Service Indicators, Management and Monitoring System (SIGMA) with a quantitative survey of 637 service users and the entire agency staff. Results demonstrate a 97.96% approval rate among the external public and a 100% positive perception among public servants and federal medical experts regarding the mitigation of behavioral crises and the optimization of the efficiency of administrative expert assessments. It is concluded that cognitive and sensory accessibility is a vector for humanizing public management and enforcing fundamental rights.

Keywords: sensory accessibility. Autism Spectrum Disorder. social security services. neuroarchitecture. public management humanization.

Resumo: O presente artigo analisa os impactos da adaptação dos espaços físicos no atendimento prestado às pessoas neurodivergentes na Administração Pública, tomando como objeto de estudo empírico a implantação da Sala de Acolhimento Sensorial Infantil na Agência da Previdência Social (APS) em Poções/BA. A pesquisa fundamenta-se nos preceitos do modelo social da deficiência, na Lei Brasileira de Inclusão (Lei nº 13.146/2015), na Lei nº 12.764/2012 e nos conceitos de neuroarquitetura e integração sensorial. Diante do aumento substancial nas demandas de avaliação biopsicossocial relativas ao Benefício de Prestação Continuada (BPC/LOAS) para crianças com Transtorno do Espectro Autista (TEA), a criação de uma zona de refúgio e regulação sensorial reduziu barreiras invisíveis decorrentes do estresse e da sobrecarga sensorial (sensory overload). A metodologia combinou análise documental de registros administrativos do Sistema de Indicadores, Gestão e Monitoramento do Atendimento (SIGMA/INSS) com pesquisa quantitativa aplicada a 637 usuários e à totalidade do corpo funcional da agência. Os resultados revelam uma aprovação de 97,96% pelo público externo e 100% de percepção positiva por parte dos servidores e peritos médicos federais quanto à mitigação de crises comportamentais e otimização da eficiência dos atos administrativos

periciais. Conclui-se que a acessibilidade cognitiva e sensorial constitui vetor de humanização da gestão pública e efetivação de direitos fundamentais.

Palavras-chave: acessibilidade sensorial. Transtorno do Espectro Autista. atendimento previdenciário. neuroarquitetura. humanização da gestão pública.

Resumen: Este artículo analiza los impactos de la adaptación de los espacios físicos en la atención prestada a las personas neurodivergentes en la Administración Pública, tomando como objeto de estudio empírico la implantación de la Sala de Acogida Sensorial Infantil en la Agencia de la Seguridad Social (APS) de Poções, Bahía. La investigación se fundamenta en los preceptos del modelo social de la discapacidad, en la Ley Brasileña de Inclusión (Ley n.º 13.146/2015), en la Ley n.º 12.764/2012 y en los conceptos de neuroarquitectura e integración sensorial. Ante el aumento sustancial de las solicitudes de evaluación biopsicosocial relativas al Beneficio de Prestación Continuada (BPC/LOAS) para niños con Trastorno del Espectro Autista (TEA), la creación de una zona de refugio y regulación sensorial redujo barreras invisibles derivadas del estrés y de la sobrecarga sensorial (sensory overload). La metodología combinó el análisis documental de registros administrativos del Sistema de Indicadores, Gestión y Monitoreo de la Atención (SIGMA/INSS) con una encuesta cuantitativa aplicada a 637 usuarios y a la totalidad del personal de la agencia. Los resultados revelan una aprobación del 97,96% por parte del público externo y una percepción positiva del 100% entre los servidores y peritos médicos federales respecto de la mitigación de crisis conductuales y la optimización de la eficiencia de los actos administrativos periciales. Se concluye que la accesibilidad cognitiva y sensorial constituye un vector de humanización de la gestión pública y de efectivización de los derechos fundamentales.

Palabras clave: accesibilidad sensorial. Trastorno del Espectro Autista. atención de la seguridad social. neuroarquitectura. humanización de la gestión pública.

1. Introduction and theoretical framework

The effective guarantee of citizenship and the realization of substantive equality - a constitutional principle requiring unequal treatment of unequal people to the extent of their inequalities - impose on Public Administration the duty to adapt its physical and operational structures to accommodate the particularities of those it serves. Within social security and welfare services, where citizens experiencing biopsychosocial vulnerability seek state protection of fundamental rights, the architecture and environmental dynamics of public spaces play a decisive role: they may facilitate inclusion or become severe invisible barriers to access to social services.

Historically, accessibility in the public sector was conceived from a strictly physical and motor perspective, prioritizing the elimination of steps, the construction of ramps, and the adaptation of sanitary facilities. However, the evolution of the normative concept of disability - consolidated by the UN Convention on the Rights of Persons with Disabilities and

incorporated into Brazilian law by Law No. 13,146/2015 (Brazilian Inclusion Law) - adopted the social model of disability. From this perspective, disability is no longer understood as a merely individual attribute and is instead understood as the result of the interaction between an individual's long-term impairments and the various barriers imposed by the environment, including architectural, attitudinal, communication, and sensory barriers.

As Souza and Rodrigues (2023) point out, adapting the physical environments of the Social Security Agency (APS) in Poções, Bahia, sought to meet rigorously the sensory needs of people with Autism Spectrum Disorder (ASD) - especially through continuous training of the service team, noise control, and appropriate lighting - and provided the technical basis and operational premise for effectively implementing welcoming spaces. Autism Spectrum Disorder is a neurodevelopmental condition characterized by changes in social communication, restricted and repetitive behavior patterns, and, very significantly, atypical sensory processing manifested as hyper- or hyporesponsiveness to environmental stimuli.

Given the progressive increase in ASD diagnoses in Brazil - supported by data from the Demographic Census of the Brazilian Institute of Geography and Statistics, which recorded more than 2.4 million diagnosed people in the country, with particularly high prevalence among children aged 5 to 9 years (IBGE, 2024) - state institutions must urgently redesign their service flows. This urgency aligns with the guidelines of Law No. 12,764/2012 (National Policy for the Protection of the Rights of Persons with Autism Spectrum Disorder), which ensures comprehensive care and priority access to social assistance and health actions and services.

In the typical reception areas of public agencies, marked by high turnover of people, continuous noise (conversations and audible queue-number alerts), direct fluorescent lighting, and long waiting periods, autistic individuals - especially children - are subjected to a constant state of sensory overload. This hyperactivation of the nervous system may trigger emotional and behavioral dysregulation crises (meltdowns or shutdowns), in some cases making it impossible to remain on site and directly compromising the performance of expert medical examinations and social evaluations essential to granting social security and welfare benefits.

2. Practical experience at APS Poções/BA: context and methodology

The practical experience developed at the Social Security Agency (APS) in Poções, a municipality in the state of Bahia, illustrates the concrete and transformative impact of environmental restructuring based on sensory inclusion. The unit faced growing and complex demand for the Continuous Cash Benefit (BPC/LOAS) for persons with disabilities. In the first

seven months of 2026 alone, the Service Indicators, Management and Monitoring System (SIGMA) recorded more than 1,000 in-person procedures at the unit, including medical examinations and social evaluations for older persons and persons with disabilities (Brasil, 2026).

Obtaining the BPC/LOAS requires neurodivergent children to undergo a rigorous biopsychosocial assessment consisting of distinct stages of medical examination and social evaluation. Prolonged time in the conventional waiting room frequently caused sensory disorganization in children even before the technical examinations began. This condition created a cycle of stress affecting not only the child and accompanying persons, but also other service users and the unit's own staff.

To mitigate these barriers and ensure dignity in service, APS Poções/BA management designed and implemented the Children's Sensory Reception Room. The space was designed according to principles of neuroarchitecture and sensory integration theory, intentionally functioning as a "refuge zone" for self-regulation. In spatial and interior-design terms, the room was stripped of aggressive visual stimuli and equipped with playful and educational resources in a neutral color palette, structured toys for proprioceptive and gentle tactile stimulation, and suitable furniture to provide predictability and safety during waiting periods.

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Figure 1 - Facade and entrance of the Sensory Reception Room at APS Poções/BA



Caption: Toys and furniture donated to the Sensory Reception Room, which is identified and integrated into the general reception area for social security services. Source: Author's collection (2026).

Figure 2 - Interior of the Children's Sensory Reception Room



Caption: Interior equipped with sensory-integration elements, adapted children's furniture, themed panels, and a visual communication opening to the waiting area. Source: Author's collection (2026).

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In addition, the structure extends to the outdoor environment through an attractive enclosure made of treated eucalyptus painted in bright, welcoming colors and integrated with a biophilic therapeutic garden.

Figure 3 - Outdoor area with eucalyptus enclosure and biophilic garden



Caption: Open area for children's self-regulation and decompression, bounded by a colorful eucalyptus enclosure and biophilic vegetation. Source: Author's collection (2026).

The presence of natural elements and the safe delimitation of the outdoor area provide a controlled environment for children's recreation and decompression, reducing cortisol and pre-service anxiety.

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Figure 4 - Detail of the therapeutic garden infrastructure and hygiene station



Caption: Detail of the adapted children's washbasin and landscaping integrated into the agency's outdoor decompression area. Source: Author's collection (2026).

3. Results and discussion

The impacts of implementing the Children's Sensory Reception Room were assessed through a quantitative empirical study conducted at the unit itself (Souza, 2026). The research collected raw data from a substantial sample of 637 users who attended APS Poções/BA between March and June 2026 and administered a census questionnaire to the entire agency staff. The data reveal statistically and socially relevant results, summarized in Table 1:

Table 1 - User perception and functional operational impact at APS Poções/BA

Indicator / evaluation category	Sample (N)	Approval / impact percentage	Institutional and clinical significance
External public approval (rated an "Excellent Initiative")	637 users	97.96%	Collective recognition of the humanization and enhancement of public space.
Mitigation of sensory crises (staff perception)	Technical/expert staff (100%)	100.00%	Elimination of interruptions caused by sensory stress; improved conditions for technical listening.
Optimization of organizational climate (experts' and assistants' perception)	Unit staff	100.00%	Reduced environmental tension and increased fluidity in conducting examinations/evaluations.

4. Conclusion

The experience of the Social Security Agency in Poções, Bahia, demonstrates that implementing interventions based on neuroarchitecture and sensory accessibility goes beyond merely improving the appearance of public facilities. It is an essential strategy for ensuring equity and overcoming invisible barriers that have historically prevented neurodivergent children from fully accessing social assistance and social security rights.

By transforming public reception into a regulating and welcoming environment, the institution reduces episodes of behavioral disorganization, improves working conditions for staff and experts, and establishes a humanized standard for providing public services. The high acceptance recorded among both the external public and staff shows that cognitive and sensory accessibility should be integrated as a permanent guideline in the management of Public Administration infrastructure.

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