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Addressing Autism Spectrum Disorder and Sensory Processing Needs in India: A Policy Proposal for Holistic Care

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Abstract

Background: Autism spectrum disorder (ASD) is a complex neurodevelopmental condition marked by challenges in social interaction and communication. Sensory processing differences are very common among autistic children, yet India does not currently have a unified, sensory-informed policy approach for autism care.

Policy objective: This policy proposal examines gaps in policy and service delivery for autistic individuals with sensory processing needs in India and proposes practical pathways to support holistic, system-level care.

Evidence base: A targeted search of PubMed and Google Scholar was conducted using terms such as "autism and sensory processing disorder," "ASD with sensory processing difficulties," and "autism policy framework," combined with keywords related to health, education and support systems.

Proposed policy: Evidence indicates substantial sensory processing needs among autistic individuals. Persistent gaps include limited early screening, inadequate access to occupational therapy and other allied services, and weak coordination across healthcare, education and community services. The proposal links primary health centres, district hospitals, schools, community services and telehealth supports.

Conclusion: Building sensory-informed screening and early-intervention pathways, strengthening workforce capacity and improving coordination across systems are critical to reducing long-term burden for autistic individuals and their families in India.

Keywords: autism spectrum disorder; sensory processing needs; policy proposal; India; early intervention; occupational therapy

Introduction

The term autism was first coined by Eugen Bleuler in 1911 to describe Autism in his description of Schizophrenia (Bleuler, 1911). In 1943, Leo Kanner, identified autism as a separate psychological disorder, He described it as an early infantile autism (Kanner, 1943). The term "infantile autism" first appeared as a diagnostic label in the Diagnostic and Statistical Manual of Mental Disorders, Third Edition (DSM-III)

(American Psychiatric Association, 1980). Over the past thirty years, autism spectrum disorder (ASD) has become one of the most rapidly increasing diagnosed conditions in childhood (Maenner et al., 2021).

The rising prevalence of ASD among children has necessitated a heightened emphasis on this issue, not only from impairment in social communication, restrictive and repetitive behaviour perspective but also from a sensory processing perspective. Today Autism Spectrum Disorder is characterized by profound challenges with social communication, social interaction, and a narrow range of interests and activities that are both unique to the individual and carried out repetitively (Lord et al., 2020). Sensory processing differences may contribute to or amplify some functional challenges associated with autism. It is estimated that between 90% and 95% of children with autism experience sensory processing difficulties (Tomchek and Dunn, 2007).

This disorder is influenced by both genetic and environmental factors affecting the developing brain. DSM-5-TR criteria is used for autism spectrum disorder diagnosis. The DSM-5-TR criteria for autism include sensory features as one of the four restricted/repetitive behaviour features defined as "hyper or hypo reactivity to sensory input or unusual interest in sensory aspects of the environment" (American Psychiatric Association, 2022).

Based on Ayres' theory, lack of sensory integration may be one of the underlying causes of the behavioural problems in children with autism (Kilroy, Aziz-Zadeh and Cermak, 2019). Children who exhibit sensory hyper reactivity may respond negatively to common sensory stimuli, including sounds, touch, or movement. Their responses include distress, avoidance, and hyper vigilance (Mazurek et al., 2013). Children who are hypo reactive appear unaware or nonresponsive to sensory stimuli that are salient to others (Miller et al., 2007). A subgroup of children who are hypo reactive exhibit sensory-seeking behaviors (i.e. they appear to seek intense stimulation to increase their arousal) that may manifest as restricted, repetitive patterns of behaviour (Ornitz, 1974). Meanwhile, topic of sensory processing disorder is not a new phenomenon, Reactivity to sensory input has been related to autism even as far back as when Kanner first began studying the disorder (Kanner, 1943).

Dating back to the 1940s, Kanner would observe children with autism who expressed hyposensitivity to stimuli (such as not hearing fire alarms when they were set off) or hypersensitivity (such as throwing tantrums when made to wear certain clothing because the child could not tolerate the texture of the fabric) (Kanner, 1943). Children with autism also have been reported to be fixated on certain sensory stimulants, such as staring at a flashing light for hours and refusing to be interrupted from it. Sensory processing/integration (SI) is the mechanism of how our brain recognizes and responds to sensory stimuli or sensation. Ayres (1972) defined SI as the neurobiological process that discriminates sensory information from the environment and one's own body and facilitates the right response within the environment (Ayres, 1979). It may also be described as the ability to detect, modulate, interpret and respond to sensory stimuli (Passarello et al., 2022).

Sensory processing disorder is recognized today as a diagnostic entity in the manual Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood-Revised generally known as Zero to Three (Miller et al., 2017) and in the Interdisciplinary council on developmental and early disorders (Greenspan and Wieder, 2007).

Sensory processing disorder is especially difficult to understand and diagnose due to the fact that one or more of the sensory systems could be jointly affected (visual, auditory, tactile, smell, taste, vestibular, proprioception and interoception). This scenario gives rise to a wide variety of symptoms, requiring different treatment strategies depending on the case and identifying the subtypes helps choose the right support and screening.

Sensory processing differences have been classified into three categories: sensory modulation disorder, sensory-based motor disorders and sensory discrimination (Miller et al., 2017).

1. Sensory modulation disorder (SMD)

Sensory modulation refers to a complex central nervous system process by which neural messages that convey information about the intensity, frequency, duration, complexity, and novelty of sensory stimuli are adjusted (Miller et al., 2009).

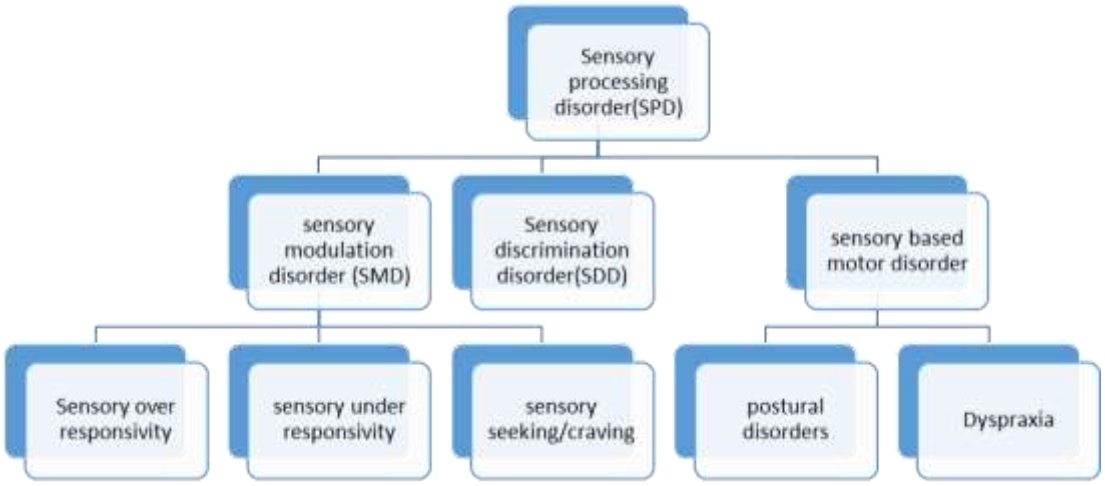

Fig 1: *Sensory processing disorder subtypes according to Miller's classification (Miller et al., 2007).*

SMD consists of three subtypes:

- Sensory over-responsivity.
- Sensory under-responsivity
- Sensory craving/seeking.

Autistic individual can experience both hypersensitivity (over-responsiveness) and hyposensitivity (under-responsiveness) to a wide range of stimuli. The majority of people have both. Sensory seekers are highly interested in movement, lights, colours, sounds, smells and taste which excites these children (Lane et al., 2010).

2. Sensory-based motor disorder (SBMD)

Sensory-based motor disorder shows motor output that is disorganized as a result of incorrect processing of sensory information affecting postural control challenges, resulting in postural disorder, or developmental coordination disorder (Miller et al., 2007).

The SBMD (Sensory-based motor disorder) subtypes are:

- Dyspraxia
- Postural disorder

3. Sensory discrimination disorder (SDD)

Sensory discrimination disorder involves the incorrect processing of sensory information (Miller et al., 2007). As recognition of ASD and demand for services increase in India, an important question is whether a nationwide policy adequately supports the sensory processing needs of autistic individuals. This policy proposal identifies key gaps and sets out practical directions for future policy.

Evidence base for the policy proposal

This policy proposal is informed by a targeted literature search using PubMed and Google Scholar. Search terms included "autism and SPD," "autism spectrum disorder with sensory processing disorder," and "policy framework for autism with sensory needs," combined with terms related to policy and support systems.

Prevalence

Autism Spectrum Disorder (ASD) is increasingly recognized as a significant public health concern in India. Currently, 1 in 65 children between the age group of two and nine are affected by ASD in India (Arora et al., 2018). And the prevalence of Autism Spectrum Disorder (ASD) in South Asia (specifically Bangladesh, India, and Sri Lanka) is estimated to range from 0.09% to 1.07% among children aged 0–17 years according to recent systemic analysis (Hossain et al., 2017).

Sensory processing difficulties are one of the core and highly prevalent feature of ASD. Evidence consistently shows that a substantial majority of autistic children experience sensory processing dysfunction. 95% of the sample of children with ASD demonstrated degree of sensory processing dysfunction particularly in domains such as sensory seeking, auditory filtering, and tactile sensitivity (Tomchek and Dunn, 2007).

Furthermore, Kirby et al. (2022), conducted a study and analysed data from 25,627 autistic children aged four and eight, identified the Autism and Developmental Disabilities Monitoring Network across multiple U.S. sites between 2006 and 2014. Sensory features were observed in 74.0% of the children included in the sample (Kirby et al., 2022). Some studies conducted in developing countries such as India and Sri Lanka, indicate a substantial prevalence of sensory processing disorder (SPD) within the population.

For example Tripathi et al. (2019) carried out study in Ahmedabad, India investigated sensory behaviours in 50 children with Autism Spectrum Disorder (ages 3–10 years) using the Short Sensory Profile. They found that 78% (39/50) exhibited definite or probable sensory processing differences, with 86% affected in tactile sensitivity and under-responsive/seeks sensation and 64% in auditory filtering (Tripathi, Dwivedi and Pathak, 2019).

Sivapalan et al. did a cross-sectional study included 100 children diagnosed with Autism Spectrum Disorder in Northern Sri Lanka. Sensory processing issues were identified in all participants, indicating a 100% prevalence of at least one sensory difficulty. Visual processing difficulties were the most commonly reported, affecting approximately 50% of the children, followed by auditory processing issues (Sivapalan et al., 2024).

Similarly, Darnal et al. conducted another study in west Bengal province of India, This study included 123 children with Autism Spectrum Disorder, categorized into younger (4–10 years) and older (11–18 years) age groups. Sensory processing difficulties were observed across multiple domains, including auditory filtering, tactile sensitivity, movement sensitivity, and sensory seeking (Darnal, Panda and Namrata, 2023).

Recently Verma et al. did the study in New Delhi, The study included 150 children (6–11 years) with developmental disabilities. Sensory sensitivity problems were noted in nearly all children; mean total sensory sensitivity scores were highest in Autism Spectrum Disorder (ASD) (79.22), Intellectual Disability (ID) (71.54) and Attention-Deficit/Hyperactivity Disorder ADHD (71.5), and hyposensitivity exceeded hypersensitivity overall (Verma, Sehgal and Dey, 2025).

These findings collectively underscore the significant presence of sensory processing disorders among children in various regions of India.

Early screening of sensory processing issues in Autism spectrum disorder:-

Early screening and identification of sensory processing disorder of autistic children can led to increased intervention effectiveness (Baranek, 2002). Timely identification and intervention can alleviate the enduring impacts of sensory processing challenges on a child's developmental trajectory and functional competencies across multiple domains (Case-Smith, Weaver and Fristad, 2015). Early intervention aids helps the autistic children in the development of strategies to manage sensory overload and enhances their communication abilities, resulting in better social interactions and relationships (Dawson et al., 2010). Standard autism screenings are recommended at 18 and 24 months by the American Academy of Pediatrics (AAP), sensory abnormalities can be observed even earlier, as early as 6 months of age in autistic children (Johnson and Myers, 2007). Abnormal sensory traits can be predictive of autism, and many individuals with autism experience atypical reactivity to sensory stimuli across all modalities (Estes et al., 2015).

Screening tools for sensory assessments in Autism.

Several instruments are employed to assess sensory processing variations in individuals with autism, questionnaires completed by parents or teachers alongside direct observational methods. These instruments do not serve as independent diagnostic tools; rather, they function to identify sensory-related behaviors that warrant additional professional assessment, such as evaluation by an occupational therapist. Some of the validated screening tools include the Short Sensory Profile, Sensory profile 2, sensory processing measure,

sensory integration and praxis test, Structured Clinical Observations of Sensory Integration (SOSI-M), Sensory Experiences Questionnaire (SEQ), Test of sensory functions in Infants (Miller et al., 2009). Screening instruments frequently integrate self-reported data from parents and educators alongside clinical observations to yield a comprehensive assessment of an individual's sensory processing patterns. This sensory processing screening tools should be used in conjunction with autism screening tools such as MCHAT, M-CHAT-R/F (Modified Checklist for Autism in Toddlers -- Revised with follow-up), The RITA-T (Rapid Interactive Screening Test for Autism in Toddlers), STAT (Screening Tool for Autism in Toddlers and Young Children), AOSI (Autism Observation Scale for Infants) (Hyman, Levy and Myers, 2020).

Effective screening tools must demonstrate high levels of specificity, sensitivity, reliability, and validity, encompassing evaluations across speech, cognitive, socio-emotional, motor, and behavioural domains. These assessments should be administered prior to school entry and incorporate information obtained from parents, caregivers, and teachers.

Diagnostic evaluation and supporting tools

Children identified as being at increased likelihood through screening should receive a comprehensive diagnostic evaluation. The instruments below have different purposes and should not be used in isolation. Some of the diagnostic tools are listed in detail:

- Autism Diagnostic Observation Schedule (ADOS-2) (Lord et al., 2012)
- Autism Diagnostic Interview-Revised (ADI-R) (Rutter, Le Couteur and Lord, 2003)
- Indian scale for the assessment of autism: - ISAA (Chakraborty et al., 2015)
- Childhood Autism Rating Scale (CARS) (Schopler et al., 1980)
- Gilliam Autism Rating Scale (GARS) (Gilliam, 2014)
- Social Responsiveness Scale (SRS-2) (Constantino and Gruber, 2012)
- Diagnostic Interview for Social and Communication Disorders (DISCO) (Wing et al., 2002)
- The Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5) (American Psychiatric Association, 2022)

Proposed policy framework and discussion

Sensory processing differences in autism can have a profound effect on participation at home, school and in the community, including communication and play. Each autistic child has an individual pattern of strengths and needs. Occupational therapy plays a vital role for autistic children by addressing sensory processing challenges, fine motor skills, and cognitive abilities (Schaaf and Nightlinger, 2007).

Occupational therapists assess sensory processing and its effect on everyday functioning. They may use play-based, sensory and occupation-focused approaches to support self-regulation, motor planning, social participation and daily activities, with individualised intervention and home programmes (Schaaf and Nightlinger, 2007).

In recent years, there has been a notable increase in the population of children diagnosed with autism in various provinces of India (Arora et al., 2018). For instance, According to available data, the Disability Adjusted Life Year (DALY) per 100,000 population is higher in Bihar for conditions such as autism spectrum disorders, attention-deficit hyperactivity disorder, and conduct disorder, all of which predominantly affect children (India State-Level Disease Burden Initiative Mental Disorders Collaborators, 2020).

In response to this issue, the Social Welfare Department of the Bihar government convened a meeting on February 17, 2022, to discuss the establishment of an occupational therapy unit specializing in sensory integration therapy at the Buniyad Kendra in Bihar. Although proposal remained under consideration for few years , but a significant policy development occurred on 6 august 2026, the department of social welfare, government of Bihar, through Buniyad Kendra and in collaboration with state health society, convened a multi-stake holder meeting to review and finalize a draft standard operating procedure (SOP) for early identification and intervention. (Government of Bihar, Social Welfare Department, 2026).

The Buniyad Centre in Bihar is an organisational platform intended to reduce poverty, vulnerability and social exclusion among people with disabilities.

This policy paper therefore recommends integrating age-appropriate developmental and autism screening, sensory-concern identification and referral across primary health centres nationwide. India currently has over 26,636 primary health centres (National Health Mission, n.d.). Implementing early screening protocols can significantly impact the lives of numerous children with autism by facilitating timely detection and intervention (Frazier, 2025). Currently India has 759 district hospitals as of June 30 2024. Beyond district hospitals, the network includes 970 other district-level health facilities, 6,155 Community Health Centers (CHCs) (National Health Mission, Ministry of Health and Family Welfare, 2024).

Following screening, existing District Early Intervention Centres and district hospitals should be strengthened to provide multidisciplinary assessment, intervention and referral for autism. Moreover, Autonomous organisations along with other government medical colleges in India should be equipped with access to occupational therapy and related services. These centres, in conjunction with primary health centres could serve as vital hubs for providing parental support, training, and education for children with autism. There is a vast pool of both ASHA (Accredited social health activist) workers and Aganwadi workers across India. Both are a crucial frontline health and childcare functionary in India's Integrated Child Development Services (ICDS) program (National Health Mission, 2026). With appropriate training and supervision, they can support identification, referral and follow-up; they should not be expected to diagnose autism.

To achieve this, the government must undertake a strategic reorganization and recruitment of professionals specializing in occupational therapy, speech therapy, and related fields. Furthermore, the establishment of a dedicated research and training institutes like (National institute of rehabilitation and CRCs) with focus on autism is essential to develop and enhance the requisite workforce. This model should be replicated on the national level.

Implementation should begin with time-bound pilots in diverse districts, followed by phased scale-up. The Ministry of Health and Family Welfare should coordinate with education, women and child development, social justice and state authorities. Core indicators should include screening coverage, completed referrals, waiting time, access to occupational therapy and allied services, school accommodations and family experience.

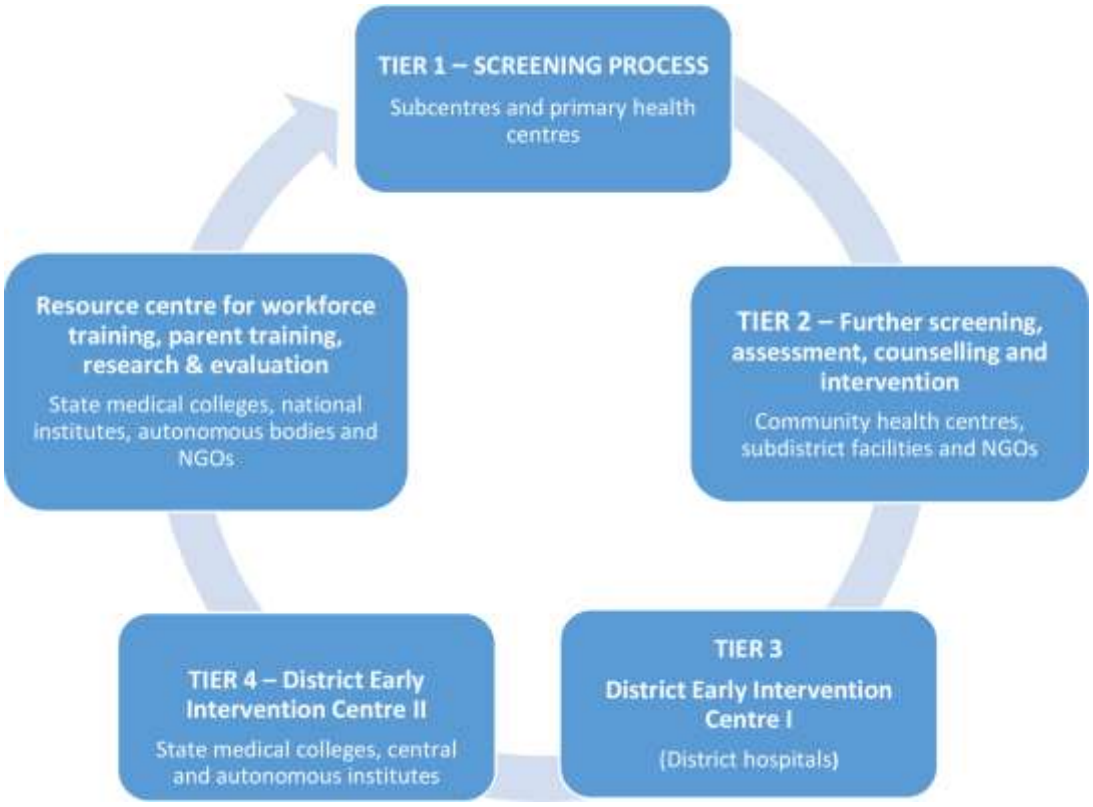

Fig 2: Proposed implementation pathway for screening, referral and intervention in India.

Policy rationale and legal context

Early intervention can improve developmental, functional and participation outcomes for some autistic children with sensory processing needs, although outcomes vary (Dawson et al., 2012).

Some children make meaningful gains following early intervention; intervention should not be framed as removing autism. Diagnosis and referral are often delayed, meaning that many children do not receive timely support (Mandell, Novak and Zubritsky, 2005).

In low- and middle-income countries (LMIC), most individuals with ASD remain undiagnosed and the vast majority has no access to evidence-based support or education (Pervin, Ahmed and Hagmayer, 2022).

India does not have a single, separate National Autism Policy; rather, autism is addressed through a system of laws, regulations and programmes administered by several ministries. This includes the National Trust Act, 1999, and the Rights of Persons with Disabilities Act, 2016, alongside programmes for skill development, early intervention, rehabilitation, welfare and inclusive education (Government of India, 1999).

This proposal recommends a coordinated national implementation framework and a minimum dataset to monitor service access, outcomes and equity. Data collection should use consent, privacy, security and de-identification safeguards (Daley, Singhal and Krishnamurthy, 2013).

Policy proposal: International collaboration

The Government of India should use international collaboration to strengthen training, research and service quality, including appropriate partnerships with initiatives such as the Global Autism Project. The Global Autism Project provides sustainable clinical, leadership, administrative, and outreach support to autism centres and professionals around the world seeking guidance (Global Autism Project, n.d.). Knowledge Sharing should be initiated with Regional hubs to share best practices for example e.g., Africa Autism Network, Autism resources network of South Africa, Autism around the globe (Autism around the Globe, n.d.).

Even Bangladesh, a another developing economy of south Asia has established the National Advisory Committee on Autism nationwide to organize awareness campaigns and training, to deal with Misdiagnosis, misunderstanding of autism, lack of awareness in the country (Globalissues.org, 2017).

It's a governmental advisory body focused on autism and other neurodevelopmental disorders in Bangladesh. Another developing nation Kenya has also formed an Autism society of Kenya, a non-profit parent-driven organization. It was founded in 2003 by parents who wanted better recognition, awareness, and support for children with Autism Spectrum Disorder in Kenya. Kenya's parent networks reduced stigma and improved school inclusion (Kenya, Autism, 2018). Moreover, ASEAN autism network started a great initiative and played a key strategic role to promote a better life for persons with autism in ASEAN member countries. They have played a magnificent role in supporting and empowering families along with regional collaboration and networking. ASEAN autism network has given a platform for 10 ASEAN countries to collaborate on autism awareness related services, education and advocacy for their rights. They have been successfully organising ASEAN autism games since 2016 (miko, miko, 2023).

Similarly south Asian autism network SAAN was also established to combat the "autism public health crises" after the adoption of Dhaka declaration on July 25, 2011. It consist of countries like India, Bangladesh, srilanka, Bhutan, Nepal, Myanmar, Thailand and timor leste. Also, Conference of the First South Asian Autism Network was held in New Delhi on 11th February 2013 which adopted the Delhi Declaration of the South Asian Autism Network for Autism Spectrum Disorders. However it lost momentum due to political tensions and budget contsraints. The proposal supports revival of networks such as SAAN with a defined mandate, budget and work plan for regional collaboration and participation of autistic people and families (Business Standard, 2013).

Policy proposal: Telehealth for Autism Spectrum Disorder

Telehealth can be implemented in remote areas of India for assessment support, caregiver training and follow-up. Technologies such as Canvas Dx have been used to assess a child's social-communication skills and behaviour and may support early identification (Smith et al., 2017).

Furthermore, Jaipur-based Aignosis offers similar AI powered solutions for early screening, diagnosis and detection of autism in India. They do screening and early detection of autism after child watches the video of 5 minute duration on its app. Also, Autmed AI and ETRI's "social interaction recognition AI could be used as part of telemedicine or teletherapy in autism (National Research Council of Science & Technology, 2025).

Careful implementation of these technologies may improve access in rural and tribal areas with limited services. However, digital tools should be independently validated in Indian populations and languages and used with regulatory, consent, privacy and bias safeguards. They should not be treated as stand-alone diagnostic tools (MyndStories, 2025).

Policy proposal: Addressing financial barriers

Many developed countries provide structured financial assistance, disability allowances, subsidised therapy services and inclusive-education support. Such assistance can improve access to diagnosis, caregiver training and intervention (Social Security Administration, 2024; GOV.UK, 2024).

In contrast, families in developing countries such as India face significant financial and systemic barriers. So, despite rising prevalence of autism spectrum disorder, there is a significant lack of government funded support. Because of this, parents have to bear full cost of therapy, diagnosis and education. This increases parental stress and reduces the early intervention reach and long term educational opportunities for autistic children (Divan et al., 2012).

In India, Autistic children may be eligible for educational scholarships, travel concessions, assistive devices and rehabilitation services offered through the National Trust and the Deendayal Disabled Rehabilitation Schemes. But this all are service based and do not usually include sustained monthly financial assistance for families. The proposed policy should also assess a defined benefit package, travel and respite support, and means-tested financial or tax relief for families.

Policy proposal: Universal design for autism and sensory processing needs

According to Miller et al. (2007), individuals on the autism spectrum exhibit a range of sensory sensitivities, from hyposensitivity, characterized by a need for increased sensory input, to hypersensitivity, marked by aversions to stimuli such as bright lighting and crowded spaces (Miller et al., 2007).

Autistic individuals can sometimes experience sensory challenges or sensory overload in the workplace due to environmental stimuli, including certain lights, sounds, and smells. Employers can make workplaces more welcoming and universally accessible to autistic and other neuro divergent individuals. These changes can have positive impact. Here are some examples of specific universal design ideas that can benefit autistic employees:

- Installing light switches that give users the ability to control the brightness within a space
- Creating or designating a particular location as a quiet space
- Providing furniture with kinetic movements such as rockers and swings
- Permitting use or providing employees with noise- cancelling headphones to reduce distractions
- Installing acoustic dampening or sound-proofing materials around loud equipment or noisy areas modular, adjustable furniture, such as ergonomic chairs and standing desks (Mostafa, 2020).

Major airports and other high-volume transport facilities should provide a quiet or sensory-relief option through phased accessibility plans. Airports can be overwhelming with bright lights, continuous announcements, security screenings, and crowded spaces -- factors that can be particularly challenging for individuals with Autism and Sensory Processing Disorder.

These sensory rooms help autistic or ADHD individuals with sensory processing disorder manage the overwhelming stimuli encountered during the travel and it reduces the stress and anxiety.

It can act as a calm space for autistic individual experiencing sensory overload arising from high level of noise, bright lights, and crowds.

Overall, sensory rooms contribute to a more inclusive travel experience by enhancing confidence and comfort for individuals with autism who have sensory processing needs. Recently, Kempegowda International Airport in Bengaluru has done a splendid job by introducing India's first sensory room for autistic individual with sensory processing needs. Furthermore, international airports equipped with sensory rooms include Birmingham, San Francisco, Seattle-Tacoma, Vancouver, Shannon, Heathrow, and Dublin (Airport-Technology, 2025).

Similarly, sensory gardens for autistic kids can be designed, also government can convert many existing gardens in to sensory gardens.

It is a specially designed inclusive space offering varied tactile, auditory, visual, and movement experiences (vestibular/proprioceptive) to help autistic individuals self-regulate, reduce overload, and build skills. It features elements like textured paths, quiet zones, musical instruments, swings, and calming features like dimmed lights and weighted items to manage sensory input and promote overall well-being (The Tribune, 2026).

Vardhman Mahavir Medical College and Safdarjung Hospital in New Delhi inaugurated the "Umang Vatika - Sensory Garden", marking the launch of North India's first sensory garden established within a government healthcare institution.

Policy proposal: Schools

Schools should provide timely access to occupational therapy through school-based or block/cluster-level services. The therapist should train and support special educators and other staff in dealing with autistic children with sensory issues. There should be implementation of inclusive classroom in all government and private funded schools. Inclusive classroom ensures that children with disabilities, learning differences, sensory processing needs and special education needs have an access to same learning opportunities as their peers (Mesibov and Shea, 1996).

School accommodation programmes should include movement breaks to manage sensory input. Flexible seating such as wobble cushions, standing desks, ball chairs should be provided according to individual need and safety and also provide resistance band tools to induce body movements. Moreover visual schedules, consistent routine, clear communication, should be used in school set up. Students may be seated away from distractions like door, window and noisy environments.

Policy proposal: Healthcare facilities

Sensory-friendly pre-operative rooms and wards should be installed to reduce triggers and meltdowns for autistic children in healthcare facilities. Moreover Due to excess crowd in government and private outpatient department of hospitals (O.P.D), Autistic children can further experience sensory overload and meltdown. So, outpatient waiting time should be reduced in the hospital set up for autistic childrens. Physicians should be educated about sensory processing issues and autism in detail. General developmental screening should occur at 9, 18 and 30 months, with autism-specific screening at 18 and 24 months and referral whenever concerns arise (Council on Children with Disabilities et al., 2006). Residents, interns and other allied health professionals should be given training by occupational therapists on handling autistic children having sensory processing issues (Major et al., 2013).

Policy proposal: Central and state governments

A separate, traceable budget should be allocated for the creation of occupational therapy departments across the medical institutions in the country. Policymakers should establish vocational rehabilitation centres across the country to provide training, recruitment and placement support free of charge to autistic individuals. National and regional rehabilitation institutes should be strengthened in high-need areas.

Policy proposal: Research priorities

Expanding autism research is a critical priority. Priorities should include early identification & diagnosis, elimination of barriers. These barriers hinder early screening of infants and children in many parts of India having conservative environment. There is also a need for large-scale multicentre genetic studies on Indian population and to assess the efficacy of parent mediated interventions in home setting. Moreover, researchers can explore the topics such as the effect of inclusive classroom in Indian context. Studies should investigate the impact of parent-training programmes on child outcome in community. Research should also focus on identifying stigma associated with sensory processing issues in autistic children in the society and need of development of local universal screening at primary level. Research in developing countries has focused mainly on autistic children and gives insufficient attention to autistic adults (Pickard and Ingersoll, 2016).

Policy proposal: Parents and caregivers

Parents can create supportive peer communities, including through social media for greater communication and advocacy. They can also advocate to ensure the positive policy changes in support of the autistic people's needs at school, community and state levels (Dixon, 2021). Parents should consult a qualified occupational therapist before implementing a sensory-based home programme. A sensory diet is a personalised schedule of sensory-based activities. The program should be developed with an occupational therapist to help individual manage sensory needs, focus and regulation throughout the day. It involves a sequence of proprioceptive, visual, tactile, vestibular and other physical activities designed to alert, organise, and calm the child (Dehghani et al., 2024). Any sensory diet should be individualised, linked to functional goals, monitored and revised if it is ineffective or distressing.

Conclusion and policy action requested

Recognition of autism and sensory processing needs, and demand for services, have increased in India. Autistic children show a wide range of sensory processing differences. In developing nations such as India, existing policies do not fully or consistently address these needs. The rise in cases requires the formulation of new policies and support systems to tackle social stigma, insufficient resources, significant delays in early intervention, and a lack of understanding regarding autism and sensory processing challenges. Furthermore, it is crucial to provide adequate training for staff and physicians to manage autism cases, as well as to address the shortage of trained workers, occupational therapists, and other rehabilitation professionals in this domain. It is imperative to fortify the system and alleviate the burden on autistic people and families. Additionally, there is a need to concentrate on strategies that enhance the early intervention system to reduce long-term disabilities and improve future outcomes. The immediate policy

action requested is an inter-ministerial implementation group, time-bound district pilots and a costed plan for phased scale-up and evaluation.

Ethical approval

Not applicable. This policy proposal did not involve new studies with human or animal participants.

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None.

Conflict of interest

The authors declare no conflict of interest.

Credit authorship contribution statement

Conceptualisation: Kunal Gaurav; Writing – original draft: Kunal Gaurav; Writing – review and editing: Kunal Gaurav; Supervision: Dr Hima Charan and Dr Abhay Jaiswal.

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References

- Airport-Technology. (2025). Bengaluru Airport unveils India's first sensory room for travellers, 12th March. Available at: https://www.airport-technology.com/news/bengaluru-airport-indias-first-sensory-room/.
- American Psychiatric Association. (1980). Diagnostic and Statistical Manual of Mental Disorders. 3rd ed. Washington, DC: American Psychiatric Association.
- American Psychiatric Association. (2022). Diagnostic and Statistical Manual of Mental Disorders: DSM-5-TR. 5th ed., text revision. Washington, DC: American Psychiatric Association Publishing. Available at: https://www.ifeet.org/files/DSM-5-TR.pdf.
- Arora, N.K., Nair, M.K.C., Gulati, S. et al. (2018). Neurodevelopmental disorders in children aged 2–9 years: Population-based burden estimates across five regions in India. PLoS Medicine, 15(7), e1002615. doi:10.1371/journal.pmed.1002615.
- Autism around the Globe. (n.d.). Autism Community of Africa. Available at: https://www.autismaroundtheglobe.org/story/autism-community-of-africa/.
- Ayres, A.J. (1979). Sensory Integration and the Child. Los Angeles, CA: Western Psychological Services. Available at: https://www.wpspublish.com/.
- Baranek, G.T. (2002). Efficacy of sensory and motor interventions for children with autism. Journal of Autism and Developmental Disorders, 32(5), 397–422. doi:10.1023/A:1020541906063.
- Ben-Sasson, A., Hen, L., Fluss, R. et al. (2009). A meta-analysis of sensory modulation symptoms in individuals with autism spectrum disorders. Journal of Autism and Developmental Disorders, 39(1), 1–11. doi:10.1007/s10803-008-0593-3.
- Bleuler, E. (1911). Dementia praecox odder Gruppe der Schizophrenien. In G. Aschaffenburg (ed.). Handbuch der Psychiatrie. Leipzig: Franz Deuticke.
- Business Standard. (2013). South Asian Autism Network to hold conference on Feb 11. Available at: https://www.business-standard.com/article/pti-stories/south-asian-autism-network-to-hold-conference-on-feb-11-113020801232_1.html.
- Case-Smith, J., Weaver, L.L. and Fristad, M.A. (2015). A systematic review of sensory processing interventions for children with autism spectrum disorders. Autism, 19(2), 133–148. doi:10.1177/1362361313517762.

- Chakraborty, S., Thomas, P., Bhatia, T. et al. (2015). Assessment of severity of autism using the Indian Scale for Assessment of Autism. Indian Journal of Psychological Medicine, 37(2), 169–174. doi:10.4103/0253-7176.155616.
- Constantino, J.N. and Gruber, C.P. (2012). Social Responsiveness Scale, Second Edition (SRS-2). Torrance, CA: Western Psychological Services. Available at: https://www.wpspublish.com/srs-2-social-responsiveness-scale.
- Council on Children With Disabilities, Section on Developmental Behavioral Pediatrics et al. (2006). Identifying infants and young children with developmental disorders in the medical home: an algorithm for developmental surveillance and screening. Pediatrics, 118, 405–420.
- Daley, T.C., Singhal, N. and Krishnamurthy, V. (2013). Ethical considerations in conducting research on autism spectrum disorders in low and middle income countries. Journal of Autism and Developmental Disorders, 43(9), 2002–2014. doi:10.1007/s10803-012-1750-2.
- Darnal, S., Panda, S. and Namrata (2023). Sensory processing and social functioning in younger and older children with autism spectrum disorder. International Journal of Indian Psychology, 11(2), 1309–1321. doi:10.25215/1102.141.
- Dawson, G., Jones, E.J.H., Merkle, K. et al. (2012). Early behavioral intervention is associated with normalized brain activity in young children with autism. Journal of the American Academy of Child & Adolescent Psychiatry, 51(11), 1150–1159. doi:10.1016/j.jaac.2012.08.018.
- Dawson, G., Rogers, S., Munson, J. et al. (2010). Randomized, controlled trial of an intervention for toddlers with autism: the Early Start Denver Model. Pediatrics, 125(1), e17–e23. doi:10.1542/peds.2009-0958.
- Dehghani, I., Pashmdarfard, M., Pashazadeh Azari, Z. et al. (2024). Sensory Diet Program Through In-Person and Tele-Occupational Therapy in Children with Autism Spectrum Disorder: A Single-Blind Randomized Controlled Trial. Journal of Modern Rehabilitation, 19(1). doi:10.18502/jmr.v19i1.17507.
- Divan, G., Vajaratkar, V., Desai, M.U. et al. (2012). Challenges, coping strategies, and unmet needs of families with a child with autism spectrum disorder in Goa, India. Autism Research, 5(3), 190–200. doi:10.1002/aur.1225.
- Dixon, E. (2021). Autism and maternal stress. Psychology Today, 18th September. Available at: https://www.psychologytoday.com/us/blog/the-flourishing-family/202109/autism-and-maternal-stress.
- Estes, A., Zwaigenbaum, L., Gu, H. et al.; IBIS Network. (2015). Behavioral, cognitive, and adaptive development in infants with autism spectrum disorder in the first 2 years of life. Journal of Neurodevelopmental Disorders, 7, 24. doi:10.1186/s11689-015-9117-6.
- Frazier, T. (2025). Autism screening is critical for the most vulnerable children. Developmental Medicine & Child Neurology, 67(3), 279–280. doi:10.1111/dmcn.16043.
- Gilliam, J.E. (2014). Gilliam Autism Rating Scale–Third Edition (GARS-3). Austin, TX: Pro-Ed. Available at: https://www.proedinc.com/Products/13650/gars3-gilliam-autism-rating-scalethird-edition.aspx.
- Global Autism Project. (n.d.). Available at: https://www.globalautismproject.org/.
- Globalissues.org. (2017). Autism in Bangladesh: Reducing Discrimination Through Innovation. Available at: https://www.globalissues.org/news/2017/03/30/23029.
- GOV.UK. (2024). Disability Living Allowance (DLA) for children: rates. London: UK Government. Available at: https://www.gov.uk/disability-living-allowance-children/rates.
- Government of Bihar, Social Welfare Department. (2022). Notice regarding establishment of Sensory Integration Unit in Early Intervention Centres. Patna: Government of Bihar, 17th February. File No.: 418.

- Government of India. (1999). The National Trust for Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities Act, 1999. New Delhi: Ministry of Social Justice and Empowerment. Available at: https://thenationaltrust.gov.in/upload/uploadfiles/files/ACT_1999(1).pdf.
- Government of India. (2016). The Rights of Persons with Disabilities Act, 2016. New Delhi: Ministry of Law and Justice. Available at: https://www.indiacode.nic.in/handle/123456789/2155.
- Greenspan, S.I. and Wieder, S. (2007). The Interdisciplinary Council on Developmental and Learning Disorders Diagnostic Manual for Infants and Young Children (ICDL-DMIC). Bethesda, MD: Interdisciplinary Council on Developmental and Learning Disorders. Available at: https://www.icdl.com/.
- Hossain, M.D., Ahmed, H.U., Jalal Uddin, M.M. et al. (2017). Autism spectrum disorders (ASD) in South Asia: a systematic review. BMC Psychiatry, 17(1), 281. doi:10.1186/s12888-017-1440-x.
- Hyman, S.L., Levy, S.E. and Myers, S.M.; Council on Children with Disabilities, Section on Developmental and Behavioral Pediatrics. (2020). Identification, evaluation, and management of children with autism spectrum disorder. Pediatrics, 145(1), e20193447. doi:10.1542/peds.2019-3447.
- India State-Level Disease Burden Initiative Mental Disorders Collaborators. (2020). The burden of mental disorders across the states of India: the Global Burden of Disease Study 1990–2017. Lancet Psychiatry, 7(2), 148–161. doi:10.1016/S2215-0366(19)30475-4.
- Johnson, C.P. and Myers, S.M.; American Academy of Pediatrics Council on Children With Disabilities. (2007). Identification and evaluation of children with autism spectrum disorders. Pediatrics, 120(5), 1183–1215. doi:10.1542/peds.2007-2361.
- Kanner, L. (1943). Autistic disturbances of affective contact. Nervous Child, 2, 217–250.
- Kenya, Autism. (2018). Autism Society of Kenya. The East and Central Africa Medical Journal, 3, 48–50. doi:10.33886/ecamj.v3i1.70.
- Kilroy, E., Aziz-Zadeh, L. and Cermak, S. (2019). Ayres theories of autism and sensory integration revisited: what contemporary neuroscience has to say. Brain Sciences, 9(3), 68. doi:10.3390/brainsci9030068.
- Kirby, A.V., Bilder, D.A., Wiggins, L.D. et al. (2022). Sensory features in autism: Findings from a large population-based surveillance system. Autism Research, 15(4), 751–760. doi:10.1002/aur.2670.
- Lane, A.E., Young, R.L., Baker, A.E.Z. and Angley, M.T. (2010). Sensory processing subtypes in autism: association with adaptive behavior. Journal of Autism and Developmental Disorders, 40(1), 112–122. doi:10.1007/s10803-009-0840-2.
- Lord, C., Brugha, T.S., Charman, T. et al. (2020). Autism spectrum disorder. Nature Reviews Disease Primers, 6(1), 5. doi:10.1038/s41572-019-0138-4.
- Lord, C., Rutter, M., DiLavore, P.C. et al. (2012). Autism Diagnostic Observation Schedule, Second Edition (ADOS-2) Manual (Part I): Modules 1–4. Torrance, CA: Western Psychological Services. Available at: https://www.wpspublish.com/ados-2-autism-diagnostic-observation-schedule-second-edition.
- Maenner, M.J., Shaw, K.A., Bakian, A.V. et al. (2021). Prevalence and characteristics of autism spectrum disorder among children aged 8 years — Autism and Developmental Disabilities Monitoring Network, 11 sites, United States, 2018. MMWR Surveillance Summaries, 70(11), 1–16. Available at: https://www.cdc.gov/mmwr/volumes/70/ss/ss7011a1.htm.
- Major, N.E., Peacock, G., Ruben, W. et al. (2013). Autism Training in Pediatric Residency: Evaluation of a Case-Based Curriculum. Journal of Autism and Developmental Disorders, 43, 1171–1177. doi:10.1007/s10803-012-1662-1.
- Mandell, D.S., Novak, M.M. and Zubritsky, C.D. (2005). Factors associated with age of diagnosis among children with autism spectrum disorders. Pediatrics, 116(6), 1480–1486. doi:10.1542/peds.2005-0185.

- Mazurek, M.O., Vasa, R.A., Kalb, L.G. et al. (2013). Anxiety, sensory over-responsivity, and gastrointestinal problems in children with autism spectrum disorders. Journal of Abnormal Child Psychology, 41(1), 165–176. doi:10.1007/s10802-012-9668-x.
- Mesibov, G.B. and Shea, V. (1996). Full inclusion and students with autism. Journal of Autism and Developmental Disorders, 26(3), 337–346. doi:10.1007/BF02172478.
- miko, miko. (2023). ASEAN Autism Network (AAN) Executive Committee Meeting 28 February 2023 - LSPR Institute. LSPR Institute. Available at: https://www.lspr.ac.id/asean-autism-network-aan-executive-committee-meeting-28-february-2023-2/.
- Miller, L.J., Anzalone, M.E., Lane, S.J. et al. (2007). Concept evolution in sensory integration: a proposed nosology for diagnosis. American Journal of Occupational Therapy, 61(2), 135–140. doi:10.5014/ajot.61.2.135.
- Miller, L.J., Nielsen, D.M., Schoen, S.A. and Brett-Green, B.A. (2009). Perspectives on sensory processing disorder: a call for translational research. Frontiers in Integrative Neuroscience, 3, 22. doi:10.3389/neuro.07.022.2009.
- Miller, L.J., Schoen, S.A., Mulligan, S. and Sullivan, J. (2017). Identification of sensory processing and integration symptom clusters: a preliminary study. Occupational Therapy International, 2017, 2876080.
- Mostafa, M. (2020). Architecture for autism: Built environment performance in accordance to the autism ASPECTSS design index. In Autism 360° (pp. 479–500). Academic Press. doi:10.1016/B978-0-12-818466-0.00023-X.
- MyndStories. (2025). Aignosis develops a 5-minute screening tool for childhood autism, 25th February. Available at: https://www.myndstories.com/aignosis-develops-ai-enabled-screening-tool-to-detect-early-autism.
- National Health Mission. (n.d.). Infrastructure. Available at: https://nhm.gov.in/index1.php?lang=1&level=2&sublinkid=1220&lid=190.
- National Health Mission, Ministry of Health and Family Welfare. (2024). Quarterly Progress Report (QPR) – NHM MIS. New Delhi: Government of India, 30th June. Available at: nhm.gov.in.
- National Health Mission, Ministry of Health & Family Welfare, Government of India. (2026). About Accredited Social Health Activist (ASHA). Available at: https://nhm.gov.in/index1.php?lang=1&level=1&lid=226&sublinkid=150.
- National Research Council of Science & Technology. (2025). ETRI develops innovative technology for early autism screening in young children. News-Medical.Net, 30th June. Available at: https://www.news-medical.net/news/20250630/ETRI-develops-innovative-technology-for-early-autism-screening-in-young-children.aspx.
- Ornitz, E.M. (1974). The modulation of sensory input and motor output in autistic children. Journal of Autism and Childhood Schizophrenia, 4(3), 197–215. doi:10.1007/BF02115226.
- Passarello, N., Tarantino, V., Chirico, A. et al. (2022). Sensory processing disorders in children and adolescents: Taking stock of assessment and novel therapeutic tools. Brain Sciences, 12(11), 1478. doi:10.3390/brainsci12111478.
- Pervin, M., Ahmed, H.U. and Hagmayer, Y. (2022). Effectiveness of interventions for children and adolescents with autism spectrum disorder in high-income vs. lower middle-income countries: An overview of systematic reviews and research papers from LMIC. Frontiers in Psychiatry, 13.
- Pickard, K.E. and Ingersoll, B.R. (2016). Quality versus quantity: The role of socioeconomic status on parent-reported service knowledge, service use, unmet service needs, and barriers to service use. Autism, 20(1), 106–115. doi:10.1177/1362361315569745.
- Rutter, M., Le Couteur, A. and Lord, C. (2003). Autism Diagnostic Interview–Revised (ADI-R). Los Angeles, CA: Western Psychological Services. Available at: https://www.wpspublish.com/adi-r-autism-diagnostic-interview-revised.

- Schaaf, R.C. and Nightlinger, K.M. (2007). Occupational therapy using a sensory integrative approach: a case study of effectiveness. American Journal of Occupational Therapy, 61(2), 239–246. doi:10.5014/ajot.61.2.239.
- Schopler, E., Reichler, R.J., DeVellis, R.F. and Daly, K. (1980). Toward objective classification of childhood autism: Childhood Autism Rating Scale (CARS). Journal of Autism and Developmental Disorders, 10(1), 91–103. doi:10.1007/BF02408436.
- Sivapalan, S., Sivayokan, B., Raveenthiran, K. and Sivayokan, S. (2024). Sensory issues and their impact among autistic children: a cross-sectional study in Northern Sri Lanka. Cureus, 16(10), e72130. doi:10.7759/cureus.72130.
- Smith, C.J., Rozga, A., Matthews, N. et al. (2017). Investigating the accuracy of a novel telehealth diagnostic approach for autism spectrum disorder. Psychological Assessment, 29(3), 245–252. doi:10.1037/pas0000317.
- Social Security Administration. (2024). Supplemental Security Income (SSI) Federal Payment Standards. Baltimore, MD: SSA. Available at: https://www.ssa.gov/oact/cola/SSI.html.
- The Tribune. (2026). Safdarjung Hospital opens sensory garden for children. Available at: https://www.tribuneindia.com/news/delhi/safdarjung-hospital-opens-sensory-garden-for-children/.
- Tomchek, S.D. and Dunn, W. (2007). Sensory processing in children with and without autism: A comparative study using the Short Sensory Profile. American Journal of Occupational Therapy, 61(2), 190–200. doi:10.5014/ajot.61.2.190.
- Tripathi, H.J., Dwivedi, A. and Pathak, R. (2019). Prevalence of sensory behaviours in normal Indian children with short sensory profile. International Journal of Advance Research, Ideas and Innovations in Technology, 5(1), 395–399.
- Verma, B., Sehgal, R. and Dey, M. (2025). Exploring prevalence of sensory patterns among children with developmental disabilities: a cross-sectional study. International Journal of Contemporary Pediatrics, 12(3), 471–478. doi:10.18203/2349-3291.ijcp20250413.
- Wing, L., Leekam, S.R., Libby, S.J. et al. (2002). The Diagnostic Interview for Social and Communication Disorders: background, inter-rater reliability and clinical use. Journal of Child Psychology and Psychiatry, 43(3), 307–325. doi:10.1111/1469-7610.00023.