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Autism Therapies in Nepal: A Review of Available Interventions, Effectiveness Evidence, Accessibility Barriers, and Research Gaps

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Abstract: Autism Spectrum Disorder (ASD) affects approximately 1 in 100 children globally, yet in Nepal, awareness is limited, diagnosis is delayed, and therapy access is severely constrained. This review synthesises literature on autism therapies in Nepal from 2014 to 2026. Findings reveal diverse documented interventions—pharmacological, occupational, physical, speech, psychological, yoga-based, vision therapy, and augmentative and alternative communication (AAC)—but no randomised controlled trials have been conducted in Nepal. Accessibility barriers are severe: services concentrate in Kathmandu; workforce shortages leave districts without therapists; the monthly disability allowance is insufficient; and no national autism strategy exists. AAC remains primarily low-tech. Urgent action is needed, including prevalence studies, RCTs of culturally adapted interventions, service extension beyond urban centres, and a national autism strategy.

Keywords: *Autism spectrum disorder; Nepal; therapy accessibility; occupational therapy; AAC; global mental health*

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1. Introduction

Autism Spectrum Disorder (ASD) is a neurodevelopmental condition characterized by persistent challenges in social communication, restricted interests, and repetitive behaviors. The global prevalence of ASD has risen substantially over recent decades, with current estimates suggesting approximately 1 in 100 children worldwide are diagnosed with the condition. While high-income countries have established relatively robust systems for early detection, intervention, and long-term support, low- and middle-income countries—including Nepal—face significant structural, cultural, and resource-related barriers in addressing the needs of autistic individuals and their families.

In Nepal, awareness of autism remains limited among both healthcare professionals and the general public. Research indicates that the average age of diagnosis in Nepal is approximately 55.6 months, markedly later than the internationally recommended benchmark of 24 months, when early intervention is most effective (Shrestha & Shrestha, 2014). This diagnostic delay is compounded by cultural beliefs that often attribute atypical behaviors to environmental factors or inadequate parenting rather than recognizing them as manifestations of a neurodevelopmental disorder (Heys et al., 2017). Furthermore, no nationally representative prevalence study has been conducted in Nepal, leaving policymakers and healthcare planners without critical epidemiological data to guide resource allocation.

The therapeutic landscape for autism in Nepal is characterized by both emerging opportunities and persistent challenges. Evidence-based interventions commonly employed internationally—including pharmacological treatments such as oxytocin and memantine, behavioral interventions like cognitive behavioral therapy (CBT), occupational therapy, speech and language therapy, and sensory integration approaches—are gradually being introduced in Nepali clinical settings (Kaye et al., 2024; Kalaichandran et al., 2021). Complementary approaches, including music therapy, animal-assisted therapy,

and yoga-based interventions, have also shown promise in enhancing communication, sensory integration, and social skills among children with ASD (Peixoto et al., 2026). However, the availability of these therapies remains overwhelmingly concentrated in urban centers, particularly Kathmandu, leaving rural populations severely underserved.

Accessibility challenges extend beyond geographic disparities. A critical shortage of trained professionals—including occupational therapists, speech therapists, and clinical psychologists with autism-specific expertise—limits service delivery nationwide (Shrestha et al., 2019). The cost of regular therapy sessions remains prohibitive for most families, with minimal government support or insurance coverage available. Additionally, assistive technologies for augmentative and alternative communication (AAC) remain predominantly low-tech, and their usage is not yet widespread (Shrestha & Shah, 2020).

This review synthesizes current research on autism therapies within the Nepali context, examining documented interventions, their reported effectiveness, and the systemic barriers affecting accessibility. It also identifies critical data gaps—including the absence of prevalence studies, limited research on culturally adapted interventions, and under-explored intersections of caste, gender, and geography in service access. Finally, the review offers evidence-based recommendations for policy development, professional training, and future research directions aimed at improving outcomes for autistic individuals across Nepal.

2. Materials and methods

2.1. Review Design

This paper presents a narrative literature review synthesizing available evidence on autism spectrum disorder (ASD) therapies in Nepal, with a specific focus on intervention types, documented effectiveness, and accessibility challenges. A narrative review design was selected due to the heterogeneous nature of available literature—which includes empirical studies, case reports, conceptual frameworks, policy briefs, and book chapters—and the absence of sufficient randomized controlled trials or meta-analyses to support a systematic review approach.

2.2. Search Strategy

A comprehensive literature search was conducted across multiple electronic databases, including PubMed, Google Scholar, Scopus, and the Nepal Journals Online (NepJOL) platform. The search period covered publications from January 2014 to May 2026 to ensure inclusion of both foundational and recent research. The following search terms and Boolean operators were employed:

Primary terms:

Autism spectrum disorder OR ASD OR autism AND Nepal OR South Asia

Therapy-focused terms:

Therapy OR treatment OR Intervention OR Pharmacological OR Behavioral OR Occupational therapy OR speech therapy OR vision therapy OR Complementary therapy OR Music therapy OR Animal-assisted therapy.

Accessibility-focused terms:

Accessibility OR Availability OR Barriers OR Healthcare access OR Rural OR Geographic disparity OR Cost OR Affordability.

Additional terms:

Augmentative and alternative communication OR AAC OR Assistive Technology OR Early diagnosis OR Awareness.

2.3. Inclusion and Exclusion Criteria

Studies were included if they met the following criteria: (a) focused on ASD therapies, interventions, or treatment accessibility; (b) included Nepal as a study setting or provided regionally relevant South Asian data applicable to Nepal; (c) published in peer-reviewed journals, conference proceedings, or authoritative institutional reports; (d) available in English; and (e) published between 2014 and 2026. Grey literature, including policy briefs and annual reports from autism-focused non-governmental organizations in Nepal, was also considered when it provided unique accessibility or service data not available in peer-reviewed sources.

Exclusion criteria comprised: (a) studies focused exclusively on autism genetics, neurobiology, or diagnostic criteria without therapeutic or access-related content; (b) opinion pieces, editorials, or commentaries without original data or systematic synthesis; (c) publications solely focused on high-income country contexts without relevance to Nepal; and (d) duplicate publications reporting identical data.

3. Results

The synthesis of available literature yielded comprehensive findings organized into six major thematic areas. Each theme is presented with detailed narrative synthesis followed by summary tables for clarity.

3.1. Overview of Autism Therapies Documented in Nepal

The literature reveals a diverse range of autism therapies either currently available or emerging within the Nepali context. These interventions span pharmacological, behavioral, rehabilitative, complementary, and technology-based approaches. However, the depth of documentation varies substantially across therapy types, with occupational therapy and yoga-based interventions having the most empirical support from Nepali studies, while pharmacological and advanced psychological therapies remain largely undocumented in the local context.

3.1.1. Pharmacological Interventions

Emerging pharmacological treatments for ASD documented in international literature include oxytocin, bumetanide, acetylcholinesterase inhibitors, and memantine (Kaye et al., 2024). These agents target core symptoms of autism such as social communication deficits and repetitive behaviors, as well as associated symptoms including irritability and hyperactivity. The authors note that standard treatment protocols and long-term efficacy studies remain challenging to perform, with particular difficulty in conducting randomized controlled trials in ASD populations due to phenotypic heterogeneity. Within the Nepali context specifically, no empirical studies have documented the prescription patterns, availability, or outcomes of these pharmacological agents. The extent to which these medications are accessible through Nepal's healthcare system—whether through public hospitals, private pharmacies, or charitable organizations—remains entirely undocumented in the peer-reviewed literature.

3.1.2. Occupational Therapy and Physical Therapy

Occupational therapy (OT) is widely recognized as a cornerstone intervention for children with ASD, focusing on improving gross and fine motor coordination, sensory processing, and daily living skills. In Nepal, OT is commonly delivered through specialized rehabilitation centers, autism-specific schools, and occasional hospital-based programs. A distinctive feature of the Nepali context is the integration of yoga with conventional occupational therapy. Kalaichandran et al. (2021) conducted a study examining the combined effect of OT and yoga in children with ASD, reporting substantial improvements in motor function. Specifically, gross motor functional measures (GMFMs) increased from a baseline mean of 86.77 to 121.44 post-intervention, while Berg Balance Scale (BBS) scores improved from 24.77 to 40.22. These findings suggest that the integration of culturally familiar practices like yoga may enhance the acceptability and effectiveness of rehabilitative interventions in the Nepali setting.

Physical therapy (PT) focuses on enhancing motor coordination, sensory integration, postural balance, and gait patterns. The Asian Journal of Child Health (2020) documented that PT is considered a non-invasive intervention gradually gaining popularity in Nepal, with evidence indicating improved motor planning and functional independence in children with ASD. However, both OT and PT services remain concentrated in urban centers, and access in rural areas remains severely limited.

3.1.3. Speech and Language Therapy

Speech and language therapy is consistently identified across multiple sources as a core intervention domain for ASD. The conceptual framework developed by Enzai and Wahid (2025) explicitly includes speech and language therapy as one of four essential domains—alongside behavioral interventions, occupational therapy, and sensory integration approaches—for effective therapy planning. Speech therapy interventions typically target expressive and receptive language skills, pragmatic language use, augmentative and alternative communication (AAC) strategies, and social communication abilities. Despite this recognition in conceptual literature, detailed empirical data on speech therapy availability, utilization patterns, therapist-to-population ratios, or documented outcomes specifically within Nepal remain notably limited. Peixoto et al. (2026) discuss water-based speech therapy as an innovative complementary approach, though this has not been specifically evaluated in Nepal.

3.1.4. Yoga-Based Interventions

Yoga represents a distinctive intervention modality in Nepal, where it is being integrated with other therapies—particularly occupational therapy. This integration is culturally congruent given yoga's historical and contemporary prominence in Nepali society. The intervention combines physical postures (asanas), breathing exercises (pranayama), and meditation or mindfulness practices. The documented synergy between OT and yoga has been identified as particularly effective, with Kalaichandran et al. (2021) providing the most robust quantitative evidence for this combined approach. The cultural familiarity of yoga may reduce stigma associated with therapy-seeking behavior and improve treatment adherence, though this hypothesis requires empirical testing.

3.1.5. Complementary and Alternative Approaches

Peixoto et al. (2026) provide a comprehensive discussion of complementary approaches for ASD intervention, including water-based speech therapy, music therapy, and animal-assisted therapy. Water-based speech therapy utilizes the aquatic environment to facilitate speech production, reduce anxiety, and enhance motor planning for communication. Music therapy employs structured musical activities to target social communication, emotional regulation, and joint attention. Animal-assisted therapy—typically involving dogs or horses—aims to improve social engagement, empathy, and emotional

bonding. These methods collectively aim to enhance communication, sensory integration, and social skills while promoting relaxation and social inclusion for individuals with ASD. The authors emphasize that while these approaches show promise, evidence-based implementation and improved professional knowledge remain essential for achieving better outcomes.

Additional supplementary therapies documented by Kaye et al. (2024) include dietary interventions (such as gluten-free/casein-free diets), acupuncture, melatonin for sleep disturbances, and technology-based supports for education and skill development. However, none of these have been specifically studied within Nepal.

3.1.6. Psychological Therapies

Spain, Musich, and White (2022) provide the most comprehensive coverage of psychological therapies for autism, with a specific focus on adult populations. The interventions documented are shown in Table 1.

Table 1: Different Therapies and the specific interventions

Therapy Category	Specific Interventions
Cognitive-behavioral approaches	Cognitive behavioral therapy (CBT), schema therapy, compassion-focused therapy (CFT)
Mindfulness-based approaches	Mindfulness-based stress reduction (MBSR), mindfulness-based cognitive therapy (MBCT)
Behavioral approaches	Positive behavior support (PBS)
Trauma-focused approaches	Eye movement desensitization and reprocessing (EMDR)
Dialectical approaches	Dialectical behavior therapy (DBT)
Social approaches	Social skills interventions, group interventions
Systemic approaches	Systemic therapy, family therapy
Specialized approaches	Offender-focused interventions

The authors emphasize the critical importance of adapting these therapies to enhance accessibility and effectiveness for individuals with ASD, noting that standard therapeutic protocols often require modification to accommodate the cognitive, sensory, and communication profiles of autistic individuals. However, the application of these psychological therapies within the Nepali context has not been specifically documented. The availability of clinical psychologists trained in autism-specific adaptations, the cultural appropriateness of manualized Western protocols in Nepal, and the accessibility of these interventions outside urban centers remain entirely unexplored research areas.

3.1.7. Vision Therapy

Vision therapy is identified as an emerging field in Nepal aimed at addressing visual processing and perceptual issues in children with ASD. Standard vision therapy targets skills such as visual tracking (following moving objects), spatial orientation (understanding one's position in relation to the environment), convergence and accommodation (eye teaming and focusing), and hand-eye coordination—all areas frequently impaired in autism spectrum disorder. Arunachalam et al. (2022) presented a case study reporting that 30 sessions of vision therapy significantly improved a child's visual-spatial skills, attention span, and behavior. However, the authors acknowledge that this evidence is preliminary, derived from a single case, and requires replication in larger samples with controlled designs.

Shrestha et al. (2014) highlight that in Nepal, lack of awareness among both healthcare providers and parents, combined with limited availability of trained optometrists and vision therapists, challenges the wider implementation of vision therapy. Delayed diagnosis of ASD and poor recognition of visual-perceptual issues as distinct from behavioral symptoms further limit access to such interventions. Early parent and therapist feedback has been positive, suggesting potential for vision therapy as a supplementary tool, but systematic implementation remains absent.

3.1.8. Assistive Technology for Augmentative and Alternative Communication (AAC)

Shrestha and Shah (2020) provide the most focused examination of assistive technology for AAC in Nepal. Their findings reveal a concerning picture: despite the high prevalence of autism in Nepal, there has been very little progress in managing ASD through technological supports. The usage of assistive devices for AAC remains primarily low-tech, including picture exchange communication systems (PECS), basic communication boards, and simple pointing devices. High-tech options—such as speech-generating devices, tablet-based AAC applications, and eye-tracking systems—are virtually unavailable due to cost, lack of technical support, and absence of content in Nepali language.

The findings suggest a lack of sufficient resources, trained personnel, and institutional support for the development and deployment of AAC technologies in Nepal. The current status of assistive technology for AAC is not adequately addressing the needs of persons with autism in Nepal, representing a significant gap in service provision. The authors collected data from Autism Care Nepal Society (ACNS) and Special School for Disability and Rehabilitation Center (SSDRC), with findings indicating that even basic AAC resources are inconsistently available.

Table 2: Types of Autism Therapies Documented in Nepal

Therapy Category	Specific Interventions	Evidence Level in Nepal	Key Findings
Pharmacological	Oxytocin, bumetanide, acetylcholinesterase inhibitors, memantine	No local empirical data	Documented internationally; availability and utilization in Nepal undocumented
Occupational Therapy	Motor coordination, daily living skills, sensory integration	Moderate (single study)	Significant improvement in GMFM (86.77→121.44) and BBS (24.77→40.22) when combined with yoga
Physical Therapy	Motor planning, postural balance, functional independence	Limited	Gradually gaining popularity; access limited in rural areas
Speech and Language Therapy	Expressive/receptive language, pragmatic skills, AAC	Minimal conceptual	Recognized as core domain; no local outcome data
Yoga-Based Interventions	Asanas, pranayama, meditation combined with OT	Moderate (single study)	Culturally congruent; synergistic effect with OT documented
Complementary Approaches	Water-based speech therapy, music therapy, animal-assisted therapy	Minimal conceptual	Methods enhance communication, sensory integration, social skills; not evaluated in Nepal
Psychological Therapies	CBT, DBT, mindfulness, EMDR, PBS, schema therapy, CFT	No local data	Comprehensive inventory available; no Nepal-specific adaptation or evaluation
Vision Therapy	Visual tracking, spatial orientation, hand-eye coordination	Minimal (single case study)	30 sessions improved visual-spatial skills, attention, behavior; limited by awareness and trained professionals
Assistive Technology (AAC)	PECS, communication boards, speech-generating devices	Low (single descriptive study)	Primarily low-tech; high-tech options unavailable; inadequate for population needs

3.2. Reported Effectiveness of Interventions

The evidence base for intervention effectiveness in Nepal is characterized by a small number of empirical studies, several conceptual frameworks, and documented limitations from international reviews. No randomized controlled trials of autism therapies have been conducted in Nepal. The available evidence consists primarily of pre-post intervention designs without control groups, single case studies, and narrative reviews that synthesize international evidence for application in Nepal.

3.2.1. Quantifiable Improvements from Nepali Studies

The most robust quantitative evidence from Nepal comes from Kalaichandran et al. (2021) examining combined occupational therapy and yoga. These improvements suggest clinically meaningful gains in gross motor function and balance control. However, the absence of a control group means that maturation, placebo effects, or concurrent interventions cannot be ruled out as contributors to these improvements. The study also did not report long-term follow-up data, leaving durability of effects unknown.

The Asian Journal of Child Health (2020) reported that physical therapy improved motor planning and functional independence in children with ASD, though specific quantitative outcome data were not provided in the accessible abstract. The review noted that these improvements translated to better performance in activities of daily living, including dressing, feeding, and mobility.

Arunachalam et al. (2022) presented a case study of vision therapy in a single child with ASD. Following 30 sessions, the child demonstrated significant improvements in visual-spatial skills, attention span, and behavior as measured by

clinical observation and standardized parent-report measures. Specific numerical outcomes were not reported, and the single-subject design precludes generalization to broader populations.

3.2.2. Conceptual Framework for Effectiveness

Enzai and Wahid (2025) developed a conceptual framework for determining effective therapy plans in ASD. The framework emphasizes that effective therapy planning requires three essential processes: (1) comprehensive assessment (including standardized tools, clinical observation, and caregiver report), (2) goal alignment (ensuring that therapy goals reflect both clinical priorities and family preferences), and (3) adaptive intensity management (adjusting therapy frequency, duration, and approach based on ongoing progress monitoring). The authors argue that ongoing monitoring and adjustment of therapy plans are essential for ensuring effectiveness and patient-specific outcomes.

However, the authors explicitly acknowledge several limitations: the conceptual framework may require further empirical validation or prototype development to assess its practical application; the study does not empirically measure the effectiveness of therapy interventions; and there is a noted need for adaptable intensity management in therapy plans for ASD patients.

3.2.3. Limitations in Effectiveness Evidence from International Reviews

Multiple international reviews that include Nepal within broader South Asian or global contexts acknowledge substantial limitations in the evidence base:

Kaye et al. (2024) identify that standard treatment protocols and studies are challenging to perform in ASD research due to phenotypic heterogeneity, ethical considerations in placebo-controlled trials, and the multidimensional nature of autism outcomes. Long-term research is specifically needed for therapy efficacy in specific ASD subgroups, as response to interventions likely varies based on age, cognitive level, language ability, and co-occurring conditions.

Spain et al. (2022) note that limited research exists for most comorbid conditions in adults with ASD, with most psychological therapy studies excluding individuals with intellectual disability or complex mental health presentations. Limited information is available on pharmacological interventions for adults with ASD, and even less on the combination of psychological and pharmacological approaches. The authors also note that most studies have small sample sizes and lack active comparators.

Hossain et al. (2017), in their systematic review of ASD in South Asia, identified that different diagnostic procedures across studies may lead to misclassification bias, and limited generalizability exists due to only three countries being studied (excluding Nepal from the reviewed data). The authors call for standardized diagnostic approaches and population-based prevalence studies.

3.3. Accessibility Barriers to Therapy Services

Accessibility represents the most extensively documented theme in the literature, with multiple sources converging on a set of interrelated barriers that systematically disadvantage autistic individuals and their families in Nepal. These barriers operate at geographic, economic, workforce, institutional, cultural, and policy levels.

3.3.1. Geographic Disparities

The concentration of autism therapy services in urban centers—particularly Kathmandu—is repeatedly documented as a primary access barrier. Ghimire and Rana (2021) reported that most autism therapy centers are concentrated in Kathmandu and a few other urban municipalities. Rural children face severe difficulties in accessing care due to travel limitations (including poor road infrastructure, lack of public transportation, and travel times exceeding half a day), lack of local professionals, and the financial burden of travel and accommodation for families who must relocate temporarily or permanently for treatment.

Shrestha et al. (2019) emphasized that the extension of diagnostic and intervention services beyond urban areas such as Kathmandu is of utmost importance. Rural areas face severe shortages of specialists, with some districts having no occupational therapists, speech therapists, or clinical psychologists at all. The authors suggest that telehealth or mobile clinics could bridge this gap, but these models have not yet been implemented or evaluated in Nepal.

The geographic disparity extends to diagnostic services as well. The average age of diagnosis in Nepal is 55.6 months, significantly later than the international benchmark of 24 months. This delay is exacerbated for rural populations, where access to developmental pediatricians, psychiatrists, or even trained general practitioners with autism diagnostic skills is extremely limited.

3.3.2. Shortage of Trained Professionals

Kalaichandran et al. (2021) documented a nationwide scarcity of certified occupational, speech, physical, and vision therapists trained in ASD-specific interventions. This shortage is severe in absolute terms and even more pronounced relative to the estimated population of autistic individuals in Nepal.

Heys et al. (2017) discovered that both parents and professionals in Nepal possessed minimal explicit understanding of autism. Healthcare practitioners frequently attributed atypical behaviors to environmental influences or inadequate parenting rather than identifying them as manifestations of a neurodevelopmental disorder. This lack of knowledge contributes to diagnostic delays and inappropriate referrals.

Shrestha and Shrestha (2014) highlighted that the lack of autism-specific knowledge among pediatricians, educators, and community health personnel is a consistent finding across multiple studies. The incorporation of autism education into medical and teacher training programs has been recommended but not yet systematically implemented.

3.3.3. Cost and Affordability

The financial burden of autism therapy is prohibitive for most Nepali families. Autism Care Nepal Society (2023) documented that most families cannot afford the high costs associated with regular therapy sessions. A single occupational therapy session in a private center may cost NPR 500-1,500, while a full course of therapy (multiple sessions per week over months or years) can amount to thousands of dollars annually—far beyond the reach of families with average Nepali incomes.

With little to no government insurance support for autism-specific therapies, families bear the full cost out-of-pocket. Although ASD falls under Nepal's disability allowance provisions, the provided NPR 4,200 per month (approximately USD 32) is grossly insufficient to cover therapy costs. This allowance is also subject to bureaucratic hurdles and does not reach all eligible families.

The cost barrier is compounded by indirect expenses: travel to urban centers, accommodation during therapy periods, loss of parental work income, and purchase of therapy materials or assistive devices. For rural families, the cumulative financial burden often leads to treatment abandonment or limiting therapy to only the most severely affected children.

3.3.4. Lack of Integrated, Multi-Disciplinary Services

Autism Care Nepal Society (2023) documented that multi-disciplinary centers—where a child can access occupational therapy, speech therapy, psychological support, and medical care in one location—are extremely rare in Nepal. Parents must often travel to different clinics for different therapies, each with separate appointments, costs, and logistical requirements. This fragmentation makes long-term care inconsistent, as families struggle to coordinate multiple service providers.

The lack of integration also affects continuity of care. Without shared assessment frameworks, communication among providers, or coordinated goal-setting, interventions from different therapists may conflict or fail to reinforce each other. The conceptual framework proposed by Enzai and Wahid (2025) directly addresses this gap, arguing for integration among behavioral, sensory, speech, and occupational domains—but this remains a theoretical proposal rather than an implemented reality in Nepal.

3.3.5. Public Awareness and Stigma

Shrestha et al. (2014) documented that many families delay or avoid seeking help due to lack of knowledge about autism or fear of social judgment. Cultural beliefs about disability—including notions of karma, divine will, or family shame—contribute to treatment avoidance and social isolation of autistic individuals and their families.

Heys et al. (2017) provided detailed qualitative findings: both parents and professionals in Nepal possessed minimal explicit understanding of autism, frequently attributing atypical behaviors to environmental influences (such as "bad air" or maternal behavior during pregnancy) or inadequate parenting. Some participants in their study had never heard of autism at all. Among those who had heard of autism, knowledge was often superficial, and few could identify early signs or appropriate interventions.

Stigma operates at multiple levels: family shame leading to concealment of the autistic individual; community rejection and bullying; discrimination in educational settings; and even reluctance among healthcare professionals to diagnose autism due to lack of available treatment options and fear of burdening families with a stigmatizing label.

3.3.6. Inadequate Government Support and Policy Framework

Multiple sources converge on the absence of a coherent national policy framework for autism in Nepal. Autism Care Nepal Society (2023) explicitly states that there is no national autism strategy or budget specifically allocated for ASD services. While the Disability Rights Act of Nepal provides some protections, implementation is weak, and autism-specific provisions are minimal.

The absence of a nationally representative prevalence study on autism within Nepal (Heys et al., 2017; Hossain et al., 2017) further hampers evidence-based policy development. Policymakers cannot allocate resources appropriately without knowing the 规模和分布 of the autistic population. Estimates are frequently derived from global statistics (approximately 1 in 100 children), which may not adequately reflect local cultural and socioeconomic circumstances and may over- or under-estimate the true prevalence in Nepal.

3.4. Barriers Specific to Augmentative and Alternative Communication (AAC)

Shrestha and Shah (2020) provide a focused examination of AAC barriers in Nepal, revealing that despite the high prevalence of autism, very little progress has been made in managing ASD through technological supports. The usage of assistive devices for AAC remains primarily low-tech, including picture exchange communication systems (PECS), basic communication boards, and simple pointing devices. High-tech options—such as speech-generating devices, tablet-based AAC applications, and eye-tracking systems—are virtually unavailable due to cost, lack of technical support, and absence of Nepali language content. The authors collected data from Autism Care Nepal Society (ACNS) and Special School for Disability and Rehabilitation Center (SSDRC), finding that even basic AAC resources are inconsistently available. The current status of assistive technology for AAC is not adequately addressing the needs of persons with autism in Nepal, representing a significant gap in service provision.

3.5. Research and Data Gaps

The literature consistently identifies substantial research gaps that impede evidence-based policy. First, there is an absence of a nationally representative prevalence study on autism within Nepal. Estimates are frequently derived from global statistics, which may not reflect local cultural and socioeconomic circumstances (Heys et al., 2017; Hossain et al., 2017). Second, research pertaining to the lived experiences of autistic individuals and their families is alarmingly sparse, particularly within rural and marginalized populations (Sharma, 2023). Third, while some studies note ethnic and geographic disparities in diagnosis (Shrestha et al., 2019), the intersectionality of caste, gender, and rural-urban divides in access to services remains underexplored. Fourth, there is minimal research on effective, culturally adapted interventions for autism in low-resource contexts like Nepal. Finally, the conceptual framework proposed by Enzai and Wahid (2025) requires empirical validation, as it has not been tested in practice.

3.6. Recommendations from the Literature

Multiple sources provide recommendations clustered into five strategic areas. First, comprehensive national awareness campaigns are needed to educate parents, educators, and healthcare practitioners regarding early indicators of autism and the necessity of prompt intervention (Heys et al., 2017). Second, training of professionals—particularly pediatricians, educators, and community health personnel—should be prioritized, with incorporation of autism education into medical and teacher training curricula (Shrestha & Shrestha, 2014). Third, diagnostic and intervention services must be extended beyond urban areas such as Kathmandu, with telehealth or mobile clinics potentially bridging the gap (Shrestha et al., 2019). Fourth, inclusive educational policies require reinforcement, including adoption of individualized education plans (IEPs) and establishment of sensory-friendly classroom environments (Sharma, 2023). Finally, population-based prevalence studies, qualitative investigations into familial experiences, and evaluations of cost-effective interventions specifically designed for the Nepali context are urgently needed.

4. Discussion

The findings of this review reveal a critical disconnect between the documented range of autism therapies and their actual availability, effectiveness, and accessibility in Nepal. While the literature describes diverse interventions—including pharmacological treatments, occupational therapy, psychological therapies, and assistive technologies—no randomized controlled trials have been conducted in Nepal for any autism intervention. The only quantitative outcome data come from a single pre-post study of occupational therapy combined with yoga (Kalaichandran et al., 2021), which reported motor function improvements but lacked a control group and long-term follow-up.

Accessibility barriers emerge as the most consistent finding across sources. Services are heavily concentrated in Kathmandu, leaving rural populations severely underserved. The average diagnosis age of 55.6 months (Shrestha & Shrestha, 2014) is more than two years later than the recommended 24-month benchmark, with rural children facing even greater delays. Workforce shortages are acute, with some districts having no trained therapists at all (Shrestha et al., 2019). Financial barriers are equally severe—the monthly disability allowance of NPR 4,200 covers less than half of a single private therapy session, and no health insurance covers autism therapies.

The augmentative and alternative communication (AAC) gap is particularly concerning. AAC remains primarily low-tech (picture boards, PECS), with high-tech options virtually unavailable (Shrestha & Shah, 2020). For non-speaking autistic individuals, this represents a fundamental barrier to communication, education, and self-determination—yet this issue receives minimal attention in both research and policy.

Culturally, there is a tension between Western-developed interventions and the Nepali context. While psychological therapies like CBT and DBT are documented in international literature (Spain et al., 2022), no culturally adapted, validated interventions exist for Nepal. Conversely, yoga-based approaches integrated with occupational therapy show promise (Kalaichandran et al., 2021), suggesting that culturally congruent interventions may be more feasible and acceptable.

The absence of a national autism strategy (Autism Care Nepal Society, 2023) is perhaps the most consequential finding. Without coordinated policy, there is no framework for prevalence studies, workforce training, service financing, quality assurance, or outcome monitoring—leaving autistic individuals and their families without systematic support.

Several limitations of this review warrant acknowledgment. The available literature from Nepal is sparse, with many findings derived from conceptual papers or international reviews rather than local empirical studies. Publication bias may exist, and older studies may not reflect current conditions.

5. Conclusion

This review set out to synthesize available literature on autism spectrum disorder (ASD) therapies in Nepal, examining documented interventions, their effectiveness, accessibility barriers, and critical research gaps. The findings reveal a troubling landscape: while a diverse range of therapies—pharmacological, occupational, physical, speech, psychological, complementary, vision therapy, and augmentative and alternative communication (AAC) interventions—are described in the literature, the evidence for their effectiveness in Nepal is extremely weak. No randomized controlled trials have been conducted in the country, and the only quantitative outcome data derive from a single pre-post study of combined occupational therapy and yoga.

Accessibility barriers represent the most consistent and severe finding across all sources. Geographic concentration of services in Kathmandu, acute workforce shortages, prohibitive costs, fragmented service delivery, low public awareness, persistent stigma, and the absence of a national autism strategy collectively create a system that systematically excludes the majority of autistic individuals—particularly those in rural areas, lower socioeconomic strata, and marginalized communities. The average diagnosis age of 55.6 months, more than two years later than the international benchmark for early intervention, represents a critical loss of opportunity for effective support.

The AAC gap is especially concerning, as non-speaking autistic individuals in Nepal have virtually no access to high-tech communication devices and inconsistent access even to low-tech options. This constitutes a fundamental human rights issue, as communication is essential for education, healthcare access, social participation, and self-determination.

Culturally, the uncritical importation of Western-developed interventions without local adaptation and validation is problematic. Conversely, culturally congruent approaches such as yoga-based interventions integrated with occupational therapy show promise and warrant rigorous evaluation through controlled trials.

Several recommendations emerge with urgency. First, a nationally representative prevalence study is essential to estimate population need and guide resource allocation. Second, randomized controlled trials of promising, culturally adapted interventions—including OT-yoga combinations, task-shifted parent training, and low-tech AAC implementation—must be prioritized. Third, qualitative research capturing the lived experiences of autistic individuals and their families is needed to ensure person-centered service development. Fourth, innovative service delivery models such as telehealth, mobile clinics, and task-shifting to community health workers should be evaluated for extending services beyond Kathmandu. Fifth, a national autism strategy with dedicated budget, workforce development plan, and monitoring framework must be developed and implemented.

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